### **Wetlands Evaluation Report**



# State Road 87 Connector PD&E Study Limits: From the Intersection of SR 87S and US 90 to SR 87 N

#### Financial Project ID #'s Federal Aid Project #'s

41674832201 SFT1 296 R 41674832202 S129 348 R 41674842201 TCSP 033 U 41674842202 T129 348 R 41674842290 T129 348 R

ERC #: 09-143



P.O. Box 607 Chipley, FL 32428

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#### **Final Report:**

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#### **EXECUTIVE SUMMARY**

The State Road (SR) 87 Connector Project Development and Environment (PD&E) project is comprised of approximately 8 miles stretching between the intersection of US 90/SR 87 south and the intersection of SR 89/SR 87 north. The alignments are located north of the City of Milton and south of Whiting Field and cross both the Blackwater River and Clear Creek. The project is needed to provide an alternate connection from SR 87 south to SR 87 north to facilitate emergency evacuation, ease traffic, and increase the overall Level of Service (LOS) of the existing alignment.

Based on Florida Land Use Forms Classification System (FLUCCS), the alignments are currently dominated by wetland forested mix (FLUCCS #6300), hardwood coniferous – mixed (FLUCCS #4340), coniferous plantation (FLUCCS #4410), and rangeland (FLUCCS #3100 & #3300). There are approximately 57 acres of wetlands within the Alternative 1 alignment and approximately 56 acres of wetlands within the Alternative 2 alignment. Approximately 35 acres of wetlands within alignment 1 and 31 acres of wetlands within alignment 2 are proposed for direct impact. Approximately 22 acres are potentially proposed for shading in both alignments 1 and 2 and there will be approximately 190 acres of indirect and cumulative wetland impacts. Wetland impacts have been avoided and minimized to the maximum extent practicable by bridging the high quality, sensitive wetlands associated with the Blackwater River, Clear Creek, and reticulated flatwoods salamander critical habitat.

Based on the preliminary Uniform Mitigation Assessment Methodology (UMAM) evaluation, alignment 1 will result in 53.25 units of functional loss and alignment 2 will result in 50.60 units of functional loss. Impacts can be mitigated at either the Pensacola Bay Mitigation Bank or at the Yellow River Ranch or Dutex sites. An Environmental Resource Permit (ERP) and Sovereign Submerged Lands (SSL) authorization will be required from the Florida Department of Environmental Protection (FDEP) and a Clean Water Act (CWA) Section 404 dredge and fill permit will be needed from the United States Army Corps of Engineers (USACOE).



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#### I. INTRODUCTION

#### A. General Purpose

The objective of the Project Development and Environment (PD&E) Study process is to provide the documentation necessary to determine the best route for the SR 87 Connector. The purpose of this new road is to provide a direct route for traffic on SR 87 in the south end of Santa Rosa County to access SR 87 north of Milton and to provide more direct access from I-10 to the Naval Air Station, Whiting Field. Factors under consideration include transportation needs, environmental issues, engineering, and cost. The process includes the preparation of a series of reports that document the research and analysis being conducted for these factors (Metric, 2011).

Generally, the PD&E process involves the following steps: (1) the establishment of project need; (2) the gathering and analysis of detailed information regarding the environmental features of the alignments; (3) the development of several alternatives for meeting the project need; and (4) the selection of a Preferred Alternative. During this process communication with the public is very important. This is accomplished through public meetings, interaction with various agencies, communication with elected officials, and meetings with local business owners (Metric, 2011).

#### **B. General Project Description**

SR 87 is the main north-south roadway in Santa Rosa County. SR 87 facilitates access between Navarre in the south to Milton and into Alabama. SR 87 is also a hurricane evacuation route for many. SR 87 is a designated hurricane evacuation route.

The existing roadway consists of rural and urban cross-sections, but generally is rural in nature. It passes over the Blackwater River through historic downtown Milton where it is a shared facility with US Highway 90 for 4.6 miles. Currently this facility is operating at a failing level of service (LOS F). The proposed SR 87 Connector will be a two-lane facility with right-of-way for a future four-lane divided facility.

#### C. Location

The alignments are located north of the City of Milton, Santa Rosa County, Florida and south of Whiting Field and cross both the Blackwater River and Clear Creek (Figure 1). Alignment 1 is approximately 7 miles long and Alignment 2 is approximately 8 miles long. Each alignment extends from US 90 north, crossing the Blackwater River, and then curves west towards SR 87N.



#### **II. PURPOSE AND NEED**

As described in the Alternatives Evaluation Report prepared by Metric Engineering and the PD&E study team (2011), the objective of the PD&E Study process is to provide the documentation necessary to determine the best route for the SR 87 Connector. The purpose of this new road is to provide a direct route for traffic on SR 87 in the south end of Santa Rosa County to access SR 87 in the north and to provide more direct access from I-10 to the Naval Air Station, Whiting Field. Factors under consideration include transportation needs, environmental issues, engineering, and cost. The process includes the preparation of a series of reports that document the research and analysis being conducted for these factors.

#### A. Emergency Evacuation

SR 87 serves as a vital evacuation route for northbound traffic destined for I-65 in Alabama. During times of hurricane force winds, both the Escambia Bay Bridge and the Garcon Point Bridge close leaving SR 87 north to the interstate and beyond as the only access out of the beach areas like Gulf Breeze and Navarre. SR 87 is also the only access into the area for Emergency First Responders; however, with a portion of the current alignment travelling along a congested portion of US 90, through historic downtown Milton, SR 87 cannot function as a contiguous roadway. The project will address future projected deficiencies on an established emergency hurricane evacuation route.

#### B. Multi-modalism

The project will also address the need for greater bicycle and sidewalk connectivity within the County with possible connections with the Blackwater Heritage Trail, enabling area residents' direct access. Unfortunately, Escambia County Area Transit does not provide service to this area of Santa Rosa County; however, in the future if such services were to be provided, the proposed facility would offer greater opportunities in regional network systems for transit. Finally, connection to the proposed Whiting Aviation Park will be considered. This park will be located on the east side of Whiting Field and will include a 6,000 foot runway currently under a joint use agreement with the Naval Base.

#### C. Social Demand and Economic Development

Santa Rosa County is not only a bedroom community to the greater Pensacola area, but in its own right, has also been experiencing considerable growth over the past year. This growth has spurred the need for an improved roadway network. In addition, major traffic generators in the area such as new residential developments, the Santa Rosa Criminal Justice Center, the Santa Rosa Corrections Facility, the Whiting Field U.S. Naval Air Station, the Team Santa Rosa Joint Planning area near Whiting Field, and the Santa Rosa Commerce Park in the US 90 corridor, would all benefit from the capacity this facility will provide. The need for the project is also related to committed trips associated with future development in the northern portions of Santa Rosa County, as



well as the future development in the US 90 corridor, which is hindered by the existing capacity limits of US 90.

#### D. Future Growth

Santa Rosa County has grown 173% since 1980 and is expected to grow another 92% by 2030. This increase will put further demand on the US 90/SR 87 segment, making growth and evacuation difficult due to a lack of roadway capacity. In Traffic Analysis Zones adjacent to the alignment, population is anticipated to grow by 2,648 from 2,029 to 4,677, or 131 percent, between 1997 and 2020. Employment is projected to increase by 575 from 908 to 1,483, or 63 percent. The number of dwelling units is forecasted to rise by 1,114 from 827 to 1,941, or 135 percent.

#### E. Traffic Data

According to the Santa Rosa County Comprehensive Plan, the current adopted Level of Service (LOS) standard for US 90 is D. In 2008, US 90 from Ward Basin Road to SR 87N had a failing level of service. Without the proposed improvement, the operating conditions will continue to deteriorate. The Raw Model Volume for the 2020 Needs Plan for this new segment is 9,472 vehicles per day. This would provide much needed relief to US 90.

#### F. Safety/Crash Rates

The information below contains crash data from the period of 2004 thru 2009 according to Florida Department of Transportation TSAT data base. On SR 87 south, from I-10 to US 90, between mile points 18.500 (I-10) and 19.769 (US 90), there were a total of 86 crashes, 47 of those were with injuries, and 39 with property damage only. The majority of the crashes in this segment occurred at the US 90/SR 87S intersection.

On US 90, from SR 87 south to SR 87 north, between mile points 11.610 and 16.202, there were a total of 234 crashes, 144 of those were with injuries, 1 fatality and 89 with property damage only. The majority of these crashes were distributed throughout the segment. There was, however, a slightly higher concentration of crashes at the US 90/SR 87N intersection. The single fatality in the segment occurred at milepost 13.847 just east of Ward Basin Road.

On SR 87N, from US 90 to Southridge Road, between mile points 0.004 and 11.362, there were a total of 166 crashes, 113 of those were with injuries, and 53 with property damage only. As with the segment along US 90, the majority of these crashes were distributed throughout the segment. There was, however, a slightly higher concentration of crashes at the US 90/SR 87N intersection.

The SR 87 Connector will include a new roadway to connect SR 87S and SR 87N. Presently, the SR 87 alignment follows along US 90, a congested roadway, for five miles. This portion of the alignment is operating at a LOS F and is the area where the only fatality in the alignment occurred. Improvements to the existing roadway in this vicinity



are difficult due to the historic downtown Milton area. By developing a new alignment that does not follow the existing US 90 alignment, the traveler would be able to avoid this high traffic area.

#### **G. Plan Consistency**

The proposed new facility is consistent with the Santa Rosa County Comprehensive Plan, and is also referenced in the County's Capital Improvements Schedule in Policy 4.1.E.3. The Comprehensive Plan design year for this facility is currently 2025, although as the project moves through the next study phase and a formal forecast traffic report is completed, the design year will change to allow for a standard twenty year forecast complying with Federal guidelines (Design Year 2035). Likewise, the proposed new facility is in the TIP and the STIP, as well as, in the Florida/Alabama TPO five-year work program.

#### III. WETLAND IDENTIFICATION, DELINEATION, AND DATA COLLECTION

#### A. Introduction

In accordance with Executive Order 11990, Protection of Wetlands, dated May 23, 1977, a wetland evaluation was conducted for the alternative alignments. The study alignments were evaluated relative to existing site conditions and possible impacts that would be associated with the road construction. Wetland identification was accomplished with aerial photographs, National Wetland Inventory (NWI) (U.S. Fish and Wildlife Service, 2010) maps, the Santa Rosa County soil survey, U.S. Geological Survey (USGS) topography maps, and onsite wetland delineation. Delineations followed the "Corps of Engineers Wetland Delineation Manual, Regional Supplement" (Army, 1987 & 2009), Chapter 62-340 of the Florida Administrative Code, and Part 2 Chapter 18 of the FDOT PD&E Manual (Wetlands and Other Surface Waters). Field investigations were conducted in September 2011, January 2012, and August 2012.

#### B. Methodology

ERC employed a three phase protocol to evaluate and delineate the extent and nature of wetlands in the proposed alignments. In phase 1, spatial data sources and other public sources of information were obtained and reviewed to develop a preliminary assessment of the physical and biological characteristics for the general area proposed for possible realignments. Several key references included *Florida Wetland Plants: An Identification Manual* (Tobe, et. Al., 1998), the *Soil Survey of Santa Rosa County, Florida* (USDA-NRCS, 1980), 7.5 minute Quadrangle Maps (U.S. Geological Survey), and the *Guide to Vascular Plants of the Florida Panhandle* (Clewell, 1985).

In phase 2, ERC conducted an analysis of historic and current maps and spatial data including a series of aerial photographs to more specifically characterize the ecological and physical characteristics of the land and surface waters for the areas proposed for possible realignments. ERC scientists with expertise in local ecosystems inspected the



areas proposed for the realignments and recorded soil, vegetative, and hydrological data. Information obtained from the initial site visits were combined with previous research to develop maps that depicted vegetative communities classified by the Florida Natural Areas Inventory (FNAI, 2009), land use classified by the Florida Land Use, Cover, and, Forms Classification System (FLUCCS) (North Florida Water Management District, 2007) and wetlands classified using the National Wetlands Inventory (NWI) (U.S Fish and Wildlife Service, 2010).

In phase 3, ERC selectively sampled representative polygons to verify, or ground-truth, the spatial data delineations of vegetative communities, land uses, and wetland types in the field. During the phase 3 field visits, ERC biologists delineated the regulated jurisdictional wetland habitats per State and Federal guidelines. These guidelines were consistent with the procedures specified in the Florida Administrative Code and the United States Army Corps of Engineers (USACOE) 1987 Wetland Delineation Manual and the 2009 regional supplement. ERC biologists marked the wetland boundaries in the field by placing numbered flags at closely spaced (between 5 and 30 feet depending on line of sight) intervals and recording each flag position using GPS. Maps depicting the location of each wetland flag were provided to surveyors for their use in obtaining exact positions of each wetland flag. All figures in this report depict the GPS located wetland flags and delineations, not the surveyed points. Final jurisdictional determinations will be made by State and Federal regulatory agencies.

#### C. Land Use

The existing land use within the alternative alignments was classified using FLUCCS. The dominant existing land use in both alignments was Wetlands Forested Mix, Hardwood Coniferous-Mixed, Coniferous Plantations, and Rangeland. The acreage and percent of existing land use cover by FLUCCS category is summarized in the following tables and depicted on Figure 7.

Table 1. Approximate FLUCCS Land Covers within Alternatives 1 and 2.

FLUCCS Code	FLUCCS Level 3 Descriptor	ACRES	ACRES
110	RESIDENTIAL, MEDIUM DENSITY < TWO-FIVE DWELLING UNITS PER ACRE>	0.0	1.4
120	RESIDENTIAL, MEDIUM DENSITY < TWO-FIVE DWELLING UNITS PER ACRE>	1.5	1.2
140	COMMERCIAL AND SERVICES	10.7	9.7
150	INDUSTRIAL	2.7	0.0
210	CROPLAND AND PASTURELAND	37.4	22.3
220	TREE CROPS	5.9	0.0
320	SHRUB AND BRUSHLAND	3.6	0.0
410	UPLAND CONIFEROUS FORESTS	217.1	251.1
420	UPLAND HARDWOOD FORESTS	3.6	3.6
434	HARDWOOD - CONIFEROUS MIXED	109.3	88.1
441	CONIFEROUS PLANTATIONS	51.0	108.6
443	FOREST REGENERATION AREAS	0.0	46.6



510	STREAMS AND WATERWAYS	6.7	6.7
610	WETLAND HARDWOOD FORESTS	14.4	12.5
630	WETLAND FORESTED MIXED	46.5	39.1
653	INTERMITTENT PONDS	4.6	4.6
631	WETLAND SHRUB	19.1	19.1
832	ELECTRICAL POWER TRANSMISSION LINES	55.8	55.8

The Future Land Use (Santa Rosa County, Florida, 2002) planned for this area is primarily agricultural mixed with industrial, single family residential, and conservation. The industrial future land use is located on the south side of alignments 1 and 2 at the intersection of SR 87 South and US 90 while the residential land use is located on the northern end of the alignments where they intersect with SR 87 North. The Future Land Use Map is included as Figure 9.

#### D. Soils

Soil Maps for the alignments using spatial data from the Soil Survey of Santa Rosa County, Florida (USDA, 1980) and are produced for this report as Figure 3. Selected points in delineations of the dominant soil survey map units were sampled using a bucket auger or soil probe to a depth sufficient to verify that the soil survey data was within the range of characteristics for the map unit or was a similar soil. Soils were also excavated to a depth of 12 inches or more using a tiling spade to classify the hydric soil status and characteristics of the upper soil profile. Photographs of these excavations and soil descriptions are in Appendix B.

Soils of the uplands are documented in Table 2. Table 2 also describes the depth to seasonal high water table and the approximate acreage of each non-hydric soil map unit in each alignment.

Table 2. Onsite Upland Soils Based on NRCS Soil Survey (Appendix B: Soil Photographs and Descriptions, Pages 1-5)

Soil #	Soil Name	Seasonal High	Alt.1	Alt.2	
		Water Table	Acres	Acres	
1	Albany Loamy Sand 0-5% Slopes	12-30"	17.7	17.7	
5	Bonifay Loamy Sand 0-5% Slopes	>72"	14.7	12.1	
9	Dothan Fine Sandy Loam 2-5% Slopes	42-48"	5.8	0.0	
14	Fuquay Loamy Sand 0-5% Slopes	>72"	0.1	0.1	
19	Kalmia Loamy Fine Sand 2-5% Slopes	>72"	0.8	0.8	
21	Lakeland Sand 0-5% Slopes	>72"	20.5	47.0	
22	Lakeland Sand 0-5% Slopes	>72"	3.0	3.0	
34	Pactolus Loamy Sand 0-5% Slopes	18-30"	16.1	16.4	
44	Troup Loamy Sand 0-5% Slopes	>72"	31.4	35.2	



Soils of the wetlands are documented in Table 3. Table 3 also describes the depth to seasonal high water table and the approximate acreage of each hydric soil map unit in each alignment.

Table 3. Onsite Wetland Soils Based on NRCS Soil Survey (Appendix B: Soil Photographs and Descriptions, Pages 5-6)

Soil #	Soil Name	Seasonal High Water Table	Alt. 1 Acres	Alt. 2 Acres
3	Bibb-Krinston Association	<10"	22.1	22.1
37	Rains Fine Sandy Loam	0-10"	3.5	1.0
40	Rutlege Loamy Sand	At or Near Surface	20.7	20.7

#### E. Wetland Habitat Classification and Description

The delineated jurisdictional wetlands were classified according to the NWI/ Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, 1979) (see Figures 2.1 and 2.2). The acreage of each wetland classified by NWI is contained in Table 4, below. Wetland habitats were classified using the Florida Natural Areas Inventory (FNAI, 2009) (see Figure 8 and Table 5, below). The wetland habitats were also classified according to FLUCCS (see Figure 7 and Table 1 above). Tables 4 and 5 include delineated areas located within the alignment. Actual impacted acreages will depend on the final design.

Table 4. Wetlands Classification Based on NWI / Cowardin

NWI / Cowardin	Alternative	Alternative
Classification	1 (Acres)	2 (Acres)
PF01/2F, Freshwater Forested/ Shrub Wetland	5.8	5.8
PF01F, Freshwater Forested/ Shrub Wetland	4.8	4.8
PF03C, Freshwater Forested/ Shrub Wetland	0.8	0.8
PF04/1B, Freshwater Forested/ Shrub Wetland	7.0	7.0
PSS1C, Freshwater Forested/ Shrub Wetland	0.4	0.5
PSS1F, Freshwater Forested/ Shrub Wetland	0.7	0.0
PF02/1F, Freshwater Forested/ Shrub Wetland	2.8	0.0
PF01/4C, Freshwater Forested/ Shrub Wetland	10.9	10.9
PF01C, Freshwater Forested/ Shrub Wetland	5.5	5.5
PF03/1C, Freshwater Forested/ Shrub Wetland	5.9	5.9
PSS1/3C, Freshwater Forested/ Shrub Wetland	0.6	0.6
PUBF, Freshwater Pond	0.3	0.3
R2UBH, Riverine	0.7	0.7



Table 5. Wetlands Classification Based on FNAI

FNAI	Alternative	
Classification	1 (Acres)	2 (Acres)
Seepage Slope	23.48	23.23
Basin Swamp	10.28	10.28
Dome Swamp	1.43	0
Bottomland Forest	21.66	21.66

## 1. Seepage Slope / Wet Prairie (FLUCCS #643 – Wet Prairie/Pine Savanna) (NWI Classification – Palustrine, Freshwater Forested/Shrub Wetland)

Alternative 1 = 23.48 acres

Alternative 2 = 23.23 acres

Seepage slopes are on landscapes where the downward movement of ground water is redirected laterally by less permeable layers in the soil, such as increased clay content or spodic horizons, and water flows at or near the ground surface saturating the soils. Many endemic and imperiled herbaceous plant species are associated with seepage slopes since large areas of this community have been converted to pine plantations and are susceptible to alteration by fire-suppressed growth of woody species. The majority of the seepage slope / wet prairie within the alignments is fire suppressed and dominated by black titi (*Cliftonia monophylla*), white titi (*Cyrilla racemiflora*), and galberry (*Ilex* glabra). In areas that have been mowed, such as the power line easements, greater plant diversity was observed.

## 2. Basin Swamp (FLUCCS #617 – Mixed Wetland Hardwoods) (NWI Classification – Palustrine, Freshwater Forested/Shrub Wetland) Alternative 1 = 10.28 acres

Alternative 1 = 10.28 acres
Alternative 2 = 10.28 acres

Basin Swamps are wetland plant communities characterized by long periods of inundation punctuated by dry periods. These areas are depressions in a relatively flat landscape and are dominated by a variety of canopy, subcanopy, and shrub species such as black titi (Cliftonia monophylla), pond cypress (Taxodium ascendens), swamp bay (Persea palustris), swamp tupelo (Nyssa biflora), sweetbay magnolia (Magnolia virginiana) and slash pine (Pinus elliottii). The basin swamps within the alignments are fire suppressed. The groundcover coverage is sparse and diversity is low, which is likely a result of intense competition with woody species.

## 3. Dome Swamp (FLUCCS #630 – Mixed Wetland Hardwoods) (NWI Classification – Palustrine, Freshwater Forested/Shrub Wetland) Alternative 1 = 1.43 acres

Alternative 2 = 0.0 acres

Dome Swamps are wetland plant communities characterized by long periods of inundation and occur in depressions in the landscape that may or may not be associated with other types of wetland systems (they may be isolated systems). Dome swamps typically have a partially or entirely closed canopy of cypress, black gum and sweet bay,



which also characterizes the dome swamps in the alignments. The subcanopy consists of cypress, sweet bay, swamp tupelo, and red maple (*Acer rubrum*). The Dome Swamps contain a thick woody shrub understory of St. John's wort (*Hypericum chapmanii*), titi, myrtle leaf holly (*Ilex myrtifolia*), and fetterbush (*Lyonia lucida*).

#### 4. Bottomland Forest (FLUCCS #615 – Bottom; and Stream & Lake)

(NWI Classification – 1) Palustrine, Freshwater Forested/Shrub Wetland & 2) Riverine)
Alternative 1 = 21.66 acres

Alternative 2 = 21.66 acres

Bottomland Forests are wetland plant communities that are typically contiguous with riverine communities. Bottomland forests are seasonally flooded and influenced by precipitation. Bottomland forests have closed canopies and a mixture of evergreen and deciduous trees in the canopy. The bottomland forest in the alignments surrounds both the Blackwater River and Clear Creek, which are both blackwater streams that drain into the Pensacola Bay.

#### F. Potential Wetland Impacts

#### 1. Direct and Shading Impacts

State and Federal agencies may exert jurisdiction over all wetland areas located within the alignments. Direct wetland impacts and impacts from shading will require permits from both agencies and mitigation will likely be required for the direct impacts. The State and Federal agencies use UMAM to determine the amount of mitigation required to offset impacts to wetlands and other surface waters. Agencies requiring permits will likely include:

- FDEP: Wetlands, Stormwater Treatment, and Sovereign Submerged Lands
- USACOE: CWA Section 404 Dredge and Fill Permit
- US EPA: NPDES Permit

The FNAI classification of wetland habitats was used for evaluating potential wetland impacts in the proposed alignment areas. The impacts were evaluated by comparing the current condition of each FNAI wetland habitat with the condition of a restored FNAI wetland habitat at a reference site. The condition of the restored habitat at the reference site indicates that the appropriate landscape treatments are being applied to the alignments, the appropriate surrounding land uses are present, and that there is an appropriate mix of flora and fauna.

The wetlands in the alignments are medium/high quality wetlands, based on the UMAM scoring procedure, since most wetland habitats resembled the reference condition. Anomalies exist where power lines have been constructed through wetlands, where silvicultural activities are conducted, and adjacent to development. In these disturbed areas, the wetland vegetation has either been mowed or the vegetation is fire suppressed and the appropriate ground cover species are not present.



#### 2. UMAM Explanation

#### a. Location and Landscape

The pre-project location and landscape scores for the alignments ranged from moderate (7) to optimal (9) in the current condition due to the following factors: the location of the alignments and overall landscape; connectivity to the Blackwater River and Clear Creek; the relatively un-developed surrounding land use with a variety of natural conditions and connectivity; and a lack of significant barriers to wildlife movement. In the post-project condition, the wetlands proposed for direct impact have been scored "0" while those wetlands affected by indirect impacts, or shading due to bridges such as the floodplain of the Blackwater River, have been reduced by "2" points from the preproject scores.

#### b. Water Environment

In general, the existing wetland hydrology supports the natural communities and no significant alternation in hydroperiods from historic patterns was documented. The impacts to hydrology are directly associated with adjacent silviculture and agriculture, primarily ditching and furrowing. Most of these effects are less pronounced within the floodplains of the Blackwater River. Some minor hydrologic impacts may be associated with roadways and power lines. The current conditions scores are in the optimal range and the direct impacts have been scored "0". There were no with project score decreases for the water environment UMAM parameter as a result of proposed shading and bridge construction.

#### c. Vegetation Structure

The principal components of the structure variable in this environment are: appropriate species; appropriate diversity and distribution of these species; appropriate vertical structure (i.e., canopy and groundcover); and the ability of the vegetation to carry and withstand a fire. Most of the wetlands within the alignments have been maintained in their appropriate conditions and current condition scores are in the optimal range (from 8 to 10) based upon the degree of vegetative alteration from fire suppression and/or typical disturbance regimes such as fallen trees from storms. Highly altered areas, such as those within the power lines and adjacent to agricultural areas received moderate scores. In the post-project scoring, the areas proposed for direct impact have been scored a "0" while those areas being shaded have been reduced by "1" or "2" points based on the type of vegetation located beneath the proposed roadway.

The UMAM polygon scores are included in Tables 7 and 8, below, and the full Part 1 and Part 2 UMAM polygon evaluation sheets are provided as Appendix C. Maps of the scoring polygon areas are included as Figures 8.1 through 8.9.

#### d. UMAM Summary

Alternative 1 traverses more wetland areas than Alternative 2. The following summary Tables 6 and 7 include the polygon name, wetland classifications (based on FNAI and



FLUCCS), acreage, polygon score, and functional loss for alignment alternatives 1 and 2, respectively.

#### Table 6. Alignment 1 UMAM Summary

- 2												
olygon#	Impact Type	FNAI Wetland ID	FLUCFCS Wetland ID		& Landscape oport	WaterEm	vironment	Comn Structure/	nunity Vegetation	Assessment	Area (ac)	FLUnit(
				Without	With Project	Without	With	Without	With	Score		
1A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottomland Stream & Lake Swamp	9	o	10	o	9	o	0.93	2.95	2.75
1	Shading	Bottomland Forest	615-Bottomland Stream & Lake Swamp	9	7	10	9	9	7	0.17	15.13	2.52
2	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	9	0	9	0	8	О	0.87	0.04	0.03
3	Shading	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	8	8	8	7	6	0.07	2.02	0.13
4	Shading	Basin Swamp	617-Mixed Wetland Hardwoods	9	8	9	8	9	6	0.17	4.15	0.69
5	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	8	o	0.83	6.35	5.29
6	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	8	0	8	0	7	o	0.77	3.34	2.56
7	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	o	0.73	4.55	3.34
8	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	7	О	0.80	2.34	1.87
9	Shading	Bottomland Forest	615-Bottomland Stream & Lake Swamp	9	8	10	8	8	6	0.17	1.08	0.18
9A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottomland Stream & Lake Swamp	9	0	10	0	8	o	0.90	2.50	2.25
10	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	6	0	7	o	6	o	0.63	2.75	1.74
11	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	О	0.73	8.14	5.97
12	Permanent-Dredge or Fill	DomeSwamp	630-Mixed Forested Wetland	9	0	9	0	8	0	0.87	1.43	1.24
13	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	6	0	7	0	6	o	0.63	0.25	0.16
14	Indirect	Adjacent to Shading Impact		9	8	10	10	9	8	0.07	60.07	4.00
15	Indirect	Adjacent to Direct Impact		8	6	8	4	7	6	0,23	79.33	18.51

AcreageTo	tals
Direct Impacts	34.64
Shading Impacts	22.38
Indirect Impacts	139,40
Total Wetlands	196.42



Table 7. Alignment 2 UMAM Summary

1	S SZ CONNECTION		Align	ment 2 L	IMAM Sui	nmary Ta	able					
Polygon#	Impact Type	FNAI Wetland ID	FLUCFCS Wetland ID		Location & Landscape Support		Water Environment		Community Structure/Vegetation		Area (ac)	FL Unit(s)
6103				Without	With Project	Without	With	Without	With	Score		
1A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottomland Stream & Lake Swamp	9	О	10	0	9	0	0.93	2.95	2.75
î	Shading	Bottomland Forest	615-Bottomland Stream & Lake Swamp	9	7	10	9	9	7	0.17	15.13	2.52
2	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	9	О	9	0	8	0	0.87	0.04	0.03
3	Shading	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	8	8	8	7	6	0.07	2.02	0.13
4	Shading	Basin Swamp	617-Mixed Wetland Hardwoods	9	8	9	8	9	6	0.17	4.15	0.69
5	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	o	8	0	8	0	0.83	6.35	5.29
6	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	8	0	8	0	7	0	0.77	3.34	2.56
7	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	o	8	0	7	0	0.73	4.55	3,34
8	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	7	0	0.80	2.34	1.87
9	Shading	Bottomland Forest	615-Bottomland Stream & Lake Swamp	9	8	10	8	8	6	0.17	1.08	0.18
9A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottomland Stream & Lake Swamp	9	o	10	0	8	0	0.90	2.50	2.25
10	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	6	0	7	0	6	0	0.63	2.75	1.74
11	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	8.14	5.97
14	Indirect	Adjacent to Shading Impact		9	8	10	10	9	8	0.07	60.07	4.00
15	Indirect	Adjacent to Direct Impact		8	6	8	4	7	6	0.23	73.94 Total FL>	17.25 50.60

Acreage To	tals
Direct Impacts	30.62
Shading Impacts	22.38
Indirect Impacts	134.01
Total Wetlands	187.01

#### 3. Indirect and Cumulative Impacts

Indirect wetland impacts associated with the alignments are expected to be minor, but there may be impacts to wildlife utilization and hydrology. Roadway construction may increase risks to wildlife, such as traffic mortality, noise, and light, negatively impacting the location and landscape score. There will be little indirect and cumulative impacts to the Water Environment score since bridges will be used where feasible and culverts will be placed beneath the road where wetlands typically have surface flow. Bridges and



culverts placed at the appropriate elevations will minimize indirect and cumulative impacts. The Community Structure score may be negatively impacted by new roadway construction since there will be a new vector for invasive and exotic plant species to be transported to the alignments.

Indirect and cumulative impacts are typically assessed within a 300 foot buffer adjacent to the verified wetland boundaries. Typical UMAM score reductions are shown in the Tables 6 and 7 as polygons 13 & 14 (Figures 8.8 and 8.9) with an estimate of the functional loss; however, the wetland lines should be verified and the methodology for assessment reviewed with the regulatory agencies during the permit process. Additional cumulative impacts may not be assessed if mitigation is provided in the same sub-watershed.

#### IV. ALTERNATIVES EVALUATION

#### A. Alternatives Summary

Six different alignment alternatives and the no-build alternative were evaluated during the alternatives phase of the PD&E. The alternatives evaluation and the figure below, depicting the six original alignments, were documented in the *Corridors Alternative Evaluation Summary Report* (Metric Engineering, 2011).

Figure 2.1 Corridor Maps



Corridor I
This Corridor is approximately 6.5 miles in length. It begins at SR 87S, heads north passing just west of the Santa Rosa County Crientinal Justice Facility and follows the existing powerline easement across Blackwater River. The alignment heads west just north of the powerline and Intersects SR 87N near Oakland Dr.



This Corridor is approximately 7.2 miles in length. It begins at 58 875, heads north passing just west of the Santa Rosa County Orimhal Justice Facility and follows the existing powerline easement across Blackwater River. The alignment heads west just north of the powerline, then heads northwest and intersects 58 87N just north of the SR 89N intersection.



Corridor 3

This Corridor is approximately 10.5 miles in length. It begins at SR 875, heads north passing just west of the Santa Rosa County Criminal Justice Facility and follows the existing powerline easement across Blackwater River. The alignment Continues north following the Blackwater Heintiger Trail to Marry Martin Way. The trail then continues north and northwest until it intersects SR 87N near Jesse Allen Rd.



This Corridor is approximately 5.6 miles in length. It begins at 58 875 and heads west following the existing US 90 alignment. Just west of Airport fld., the alignment heads southwest, following a portion of S Airport fld.'s alignment then crosses Blackwater River near McCrey Rd. to the East and Taylor St. to the West. The alignment then heads north following the Trail to the SR 87N intersection.

Corridor 4



This Corridor is approximately 5.6 miles in length. It begins at SR 875 and heads west following the existing US 90 allgiment. Just west of Aliport Rd., the alignment heads southwest, following a portion of S Aliport Rd.'s allgiment then crosses Blackwater River near McCray Rd. to the East and Teylor St. to the West. The alignment then continues along Old US 90 and West to the US 90/SR 89 Intersection.



This Corridor is approximately 6.5 miles in length. It begins at \$8.875 and heads west following the existing US 90 alignment. Just west of Airport Rd., the elignment heads southwest, following a portion of 5 Airport Rd.'s alignment then crosses Blackwater Rher mear McGray Rd. to the East and Taylor St. to the West. The elignment then heads north following the Trail to the \$8.87N intersects US 90.

(Metric, 2011- Page 10)



The alignment alternatives evaluation resulted in the elimination of Alternative 3, Alternative 4, Alternative 5, and Alternative 6. Alternatives 1 & 2 moved forward for additional analysis and comparison.

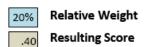
#### B. No-Build Alternative

NEPA and FHWA guidelines require an analysis to consider what would happen to the environment in the future if the proposed project was not built. The no-build alternative is not tenable due to the failing LOS for the existing corridor; however, it does provide a baseline condition to compare and measure the effects of all the build alternatives. Without the new corridor or extensive multi-laning of the north/south routes (SR 87, SR 89) and east/west route (US 90), this area, especially east of the Blackwater River Bridge, will continue to suffer from constrained conditions, and development east and north of Milton will be hindered.

#### C. Alternatives Evaluation

The results of the alignment evaluation indicated that alignment 1 was ranked the highest overall of the alignments. Alignment 1 scored high in terms of the project's purpose and need and was the least costly for construction. Table 9, below, from the "Corridors Alternative Evaluation Summary Report," shows the overall rankings of each alignment considering each of the evaluated parameters:

Table 9 – Alternatives Evaluation Ranking Matrix



Evaluation Parameter		40%		20%		30%		10%	
Corridor	Purpose and Need		Traffic		Environmental		Cost		Final Rank (Score)
1	1		1		3		4		1
		.40		.20	,	.60	-	.40	(1.60)
2	3		3		5		5		3
	3	1.20	3	.20	,	1.20	<i>J</i>	.50	(3.10)
3	2		5		3		6		2
	2	.80	3	.20	3	.90	0	.60	(2.50)
4	5		3		2		1		5
	3	2.00	3	.80	2	1.20	1	.10	(4.10)
5	6		-		1		2		4
	6	2.40	5	.80	1	.30	2	.20	(3.70)
6	4		1				2		5
	4	1.60	1	.80	6	1.80	3	.30	(4.50)

(Metric, 2011 – Page 38)



Additional analysis was then conducted on alignments 1 & 2 since they resulted in a similar ranking and both met the purpose and need of the PD&E. Both alignments met the purpose and need and moved forward for further evaluation. The field assessments described in this WER were therefore conducted on both alignments 1 and 2 to determine the preferred alignment.

Alignment 1: Alternative 1 would extend north from the US 90 and SR 87S intersection, crossing the Blackwater River near the existing power line easement. Then the roadway would run adjacent to the power line easement and connect with SR 87N near the southern split of SR 87N and SR 89 within the Manning Lane right-of-way. This alternative would be approximately 6.5 miles in length. See Figure 1 for the location of alignment 1.

<u>Alignment 2</u>: Alternative 2 is the same as Alternative 1 for the first portion, crossing the Blackwater River in the same area, but continuing north and running adjacent to the Clear Water Creek desired Florida Forever purchase area. Then the roadway would continue west to connect with SR 87N near the northern split of SR 87N and SR 89. This alternative would be approximately 7.2 miles in length. See Figure 1 for the location of alignment 2.

#### D. Avoidance and Minimization

#### 1. Avoidance

The alternative analysis documented how wetland impacts were avoided to the maximum extent practicable, given the project needs, costs, and logistics. An alternatives evaluation analysis was conducted and the results were summarized in the *Corridors Alternative Evaluation Summary Report* (Metric, 2011). Avoidance of project related impacts was considered and evaluated in relation to the logistics of the proposed alignments and the project purpose. The southern alignments 4, 5, & 6 impacted more wetland acreage than the northern alignments 1, 2, & 3 (see Table 9, below). In addition to the quantity of wetland impacts, the southern alignments did not meet the needs of the project and would have impacted State of Florida conservation lands owned by the NWFWMD. After consideration, the three southern alignment alternatives were eliminated from further analysis.

Table 9 – Estimated National Wetland Inventory Impacts for Alignments 1-6

			Alignı	ments			
Criterion	1	2	3	4	5	6	
Total Alignment Ac	Total Alignment Acres		500.26	626.72	345.76	338.35	406.40
	Palustrine	92.58	90.37	44.67	108.77	105.8	126.82
NWI Wetlands (Acres)	Estuarine	0	0	0	16.03	16.03	16.03
NVVI Wetlands (Acres)	Total	92.58	90.37	44.67	124.8	121.83	142.85
	% of Total	23%	18%	7%	36%	36%	35%



Out of the remaining three northern alignment alternatives, alternative 3 had the least potential wetland impact; however, it traversed land purchased by the FDEP as part of the Florida Forever project. Due to this logistical concern, alignment 3 was no longer feasible to meet the purpose of the project. Alignments 1 & 2 have remained for further evaluation since they avoid the most wetland areas possible while still meeting the public need and project purpose. Avoidance of all wetland impacts was not feasible along the length of the project. Wetlands have been avoided to the maximum extent practicable.

Table 10 – Alignments 1 and 2 Delineated Wetland Impacts by Habitat Type

Habitat Type (FNAI/FLUCCS)	Alignment 1 Impact (acres)	Alignment 2 Impact (acres)		
Seepage Slope - Wet Prairie / 643	23.48	23.23		
Basin Swamp / 617	10.28	10.28		
Dome Swamp / 630	1.43	0		
Bottomland Forest / 615	21.66	21.66		
Total	56.85	55.17		

#### 2. Minimization

Potential wetland impacts have also been minimized to the maximum extent practicable with the use of bridges, stormwater collection methods, construction methodology, and with the maintenance of pre and post hydrological flow between wetlands and streams. Bridges are proposed over Blackwater River and its floodplain, Clear Creek and its floodplain, and wetlands associated with the reticulated flatwoods salamander Critical Habitat Area. Figures depicting the previously considered alignments as they relate to minimization of wetland impacts are included in Appendix F. Potential wetland impacts were estimated based on each alignment shift, revision, or reduction (including revisions to bridge length). The first wetland impact acreage was calculated after the initial wetland delineation in September 2011 and resulted in 129 acres of potential wetland impact. Based on the alignment revisions, the current potential wetland impact is 55 acres (+/-).

#### a. Bridges and Stormwater Treatment

#### i. Blackwater River Floodplain

Both alternatives cross the Blackwater River and its floodplain area. In order to minimize direct, indirect, and long-term impacts, the entire floodplain area will be bridged. At the start of the bridge, a retaining wall will be constructed 25 feet landward of the jurisdictional wetland line to buffer the wetlands. The maximum amount of stormwater possible, given the land elevation at the start of the bridge south of the river, will be captured from the roadway surface and conveyed to stormwater ponds



located to the north and south of the floodplain area to minimize runoff into the river or the wetlands below the bridge. The bridge over the Blackwater River will be 5,570 ft. long, 100 feet wide (in two separate sections – 56 feet wide and 49 feet wide), and 28.25 ft. above the ground. The height and width of the proposed bridges are adequate to provide light penetration to the ground and allow for groundcover regrowth and survival. Typical Sections and Profile Sheets have been included as Appendices G and H, respectively.

ii. Wetlands Associated With Reticulated Flatwoods Salamander Critical Habitat Both alternative alignments traverse the critical habitat area of the reticulated flatwoods salamander. In order to minimize impacts to wetlands that serve as potential breeding habitat, the alignments were shifted to roughly parallel the power line easement on the southernmost edge of the critical habitat unit, which is already a disturbed linear feature traversing this area. In an effort to minimize direct impact to the wetlands, all of the wetland area traversed by the alignment will be bridged. Stormwater treatment systems will convey all runoff from the bridge to stormwater ponds to avoid and minimize impacts to wetlands and water quality under the bridge. The bridge through the critical habitat is a continuation of the bridge over the Blackwater River, 100 feet wide (in two separate sections), and 28.25 feet above the ground. The height and width of the proposed bridges are adequate to provide light penetration to the ground and allow for groundcover regrowth and survival. Typical Sections and Profile Sheets have been included as Appendices G and H, respectively.

#### iii. Clear Creek

Both alternatives cross Clear Creek and its floodplain area. In order to minimize direct, indirect, and long-term impacts, the open water portion of the creek and a portion of the floodplain will be bridged. The bridge length was determined based on the analysis conducted for the Bridge Hydraulics Report (Metric, 2012). The primary goal of the bridge is to reduce upstream flooding and to allow the creek to flow unobstructed to receiving waterbodies. Bridging the entire floodplain is not feasible since the length of the bridge over the Blackwater River and the reticulated flatwoods salamander critical habitat unit significantly increased in length resulting in an increase in overall projected construction costs. The bridge over Clear Creek will help to minimize impacts to the creek bed, which provides habitat for many aquatic organisms. Stormwater will be captured from the roadway surface and conveyed to stormwater ponds located to the north and south of the floodplain area to minimize runoff into the creek or the wetlands below the bridge. The bridge over Clear Creek will be 160 ft. long, 100 feet wide (in two separate sections), and 28.25 ft. above the ground. The canopy and some shrubs will be impacted long term by the bridges and groundcover will be impacted during construction. The height and width of the proposed bridges are adequate to provide light penetration to the ground and allow for groundcover regrowth and survival. Typical Sections and Profile Sheets have been included as Appendices G and H, respectively.



#### b. Construction methodology

During construction, wetlands outside of the limits of construction will be protected from impacts using standard construction Best Management Practices (BMPs). Bridge construction will occur from retaining wall to retaining wall to prevent sediment deposition within floodplains and stream systems.

#### c. Hydrological Connections

Connections and hydrological flows between wetland systems will be maintained by using culverts to connect wetlands that may be bisected by the proposed roadway alignments. Prior to final design, the areas of existing flow will be demarcated so that culverts can be placed at the appropriate locations and elevations. The use of culverts will ensure post-project flow regimes similar to the current condition and will prevent flooding, which will help to maintain wetland hydroperiod and function.

#### d. Threatened and Endangered Plant and Animal Species

No Federally listed wildlife species or plant species were observed during the field survey; however, critical habitats of the reticulated flatwoods salamander and Gulf sturgeon were located within the alignments. Impacts to these critical habitats will be minimized by constructing as described above. The only State listed animal species observed was the gopher tortoise; however, this species is not wetland dependent and the minimization measures described in this WER will have no beneficial impact to this species. FDOT will commit to pre-construction surveys and will coordinate with the FWC during design/build phase of the SR 87 Connector project. State-listed plants likely exist in the project alignment areas since suitable habitat areas occur based on habitat mapping. Pedestrian searches of these habitat areas were conducted for each state listed species. The Florida Fish and Wildlife Conservation Commission (FWC), Florida Department of Agriculture and Consumer Services (DOACS) and Endangered Plant Advisory Council (EPAC) are being notified that FDOT as owner is allowing for salvaging by others of affected protected plants on this project prior to construction in accordance with state law (Chapter 581.185, Florida Statutes), pending their receipt of the appropriate permits. It is our conclusion that protected plants potentially occurring within the project corridor will be impacted and may be salvaged in accordance with state law (Chapter 581.185, F.S.). Complete results, analysis, and determinations of effect for species are contained in the Endangered Species Biological Assessment Report (ESBAR) (ERC & Metric, 2012).

#### C. Mitigation / Impact Compensation

Wetland impacts are typically mitigated pursuant to Section 373.4137 Florida Statutes. In accordance with Florida Highway Administration (FHWA) policy, as contained in 23 CFR 77.11, the full range of mitigation options are being considered in developing this project to avoid long and short-term adverse impacts to wetland resources and to avoid new construction in wetlands wherever there is a practicable alternative. Alignment 1 results in a functional loss of 53.25 units and Alignment 2 results in a functional loss of



50.60 units, which includes indirect and cumulative impacts. To compensate for this functional loss, there are two options: Option 1 is the purchase of credits from the Pensacola Bay Mitigation Bank (PBMB), and option 2 is NWFWMD mitigation. The Interagency Review Team (IRT) will evaluate the options below to determine the most suitable mitigation option during the permitting of the proposed alignment impacts. Currently, 373.4137 F.S. allows FDOT any mitigation option that meets Federal and State Requirements.

#### 1. PBMB

The PBMB is a 1,200 acre site located in Santa Rosa County that offers hardwood, pine flatwoods, and herbaceous wetlands credits. The PBMB was permitted using UMAM and has "like-for-like" credits available to offset potential alignment impacts. Credits for the PBMB are currently priced between \$25,000 and \$50,000 per credit and there are approximately 25 credits available for purchase at this time. The restoration activities that are required to obtain credit release are continuing on the PBMB and it is anticipated that additional credits will be available at the time of construction.

#### 2. NWFWMD Mitigation

In Northwest Florida, mitigation is analyzed under the Northwest Florida Umbrella, Watershed-based, Regional Mitigation Plan (UWRMP), which was established in 2006. The UWRMP is a cooperative agreement between the NWFWMD and the USACOE. The team identifies mitigation options for projected impacts and develops mitigation plans. There are two mitigation areas within the Pensacola Bay Watershed with credits available, the Yellow River Ranch Site and the Dutex Property. The Yellow River Ranch site is located in the proximity of the SR 87 alignments and has approximately 50 credits available. The Dutex property is located within the Perdido watershed and has approximately 110 credits available.

#### D. Wildlife

Threatened and endangered plant and animal species potential occurrence were evaluated using known occurrence data for Santa Rosa County from FNAI Florida Element Occurrence records and by conducting field surveys, which traversed 80% or more of the habitat with transects. The State threatened animal species in the alignments were located within uplands and will typically not be considered during the wetland permitting process. The State threatened and endangered plant species were primarily located within wetlands and have been considered in the community structure scoring of the UMAM evaluation. The complete findings of threatened and endangered species survey are included in the SR 87 PD&E ESBAR (ERC & Metric, 2012).

#### E. Floodplains

The majority of the alignments are located within Floodzone X, which is not a Special Flood Hazard Area (SFHA) (FEMA, 2011). Where the alignments cross Blackwater River and Clear Creek, they are located within Floodzone AE, which is a SFHA. Bridges have been proposed in both locations where the alignments traverse the SFHAs. The only



impacts to these areas will be from sideslopes to create headwalls for the bridges and pilings.

Both alignments have the same 94.22 acre impact to floodplains. The bridge over the Blackwater River will be approximately 5,570 linear feet and the bridge over Clear Creek will be approximately 160 linear feet. There are currently no existing bridges in the proposed locations.

#### F. State Lands

The Blackwater River and Clear Creek were determined to be Sovereign Submerged Lands (SSL) by the FDEP Division of State Lands. Public easements will be required for the bridges over the Blackwater River and Clear Creek. The FDEP State Lands determination is included as Appendix E.

#### V. AGENCY COORDINATION & REQUIRED PERMITS

The State and Federal agencies will exert jurisdiction over the wetlands and waters delineated within the alignment areas. Coordination with the regulatory agencies will continue through the design phase to evaluate permitting and mitigation requirements. The project is anticipated to require an Environmental Resource Permit (ERP) from the FDEP since Sovereign Submerged Lands are involved, and a Section 404 dredge and fill individual permit from the USACOE. This project will also require a National Pollution Discharge Elimination System (NPDES) permit from the U.S. Environmental Protection Agency (EPA) since one or more acres of land are proposed to be filled. The FDOT will coordinate with the FDEP, USACOE, EPA, National Marine Fisheries Service (NMFS), US Fish and Wildlife Service (USFWS), and the Florida Fish and Wildlife Conservation Commission (FFWCC) regarding potential impacts to wetlands and wildlife species.

On May 21, 2010 Peggy Kelley (FDOT), John Flora (Metric), and Daniel Van Nostrand (ERC) met with the FDEP – Division of State Lands and the Northwest Florida Water Management District (NWFWMD) to discuss the public lands and desired Florida Forever tracts in the vicinity of the proposed corridors. The FDEP stated that corridors 2 and 3 traversed areas that were desired for purchase with Florida Forever funds. The NWFWMD stated that they owned lands within the Blackwater River that were within the paths of corridors 4, 5, and 6, south of Highway 90. The NWFWMD comments were significant in the decision to eliminate the southern corridors (4, 5, and 6) from further review.

On June 30, 2011, FDOT was notified by FDEP that funds were obtained to purchase Florida Forever lands northeast of Whiting Field. Corridor 3 traversed this land acquisition area. FDEP does not allow road construction through Florida Forever tracts and Corridor 3 was eliminated from further review.



FHWA received a notification letter from the US Coast Guard stating that bridge permitting would not be required for this project, if FHWA makes the determination that the project meets the requirements for the Surface Transportation Act (STAA). FDOT and FHWA will conduct further coordination regarding this determination. A copy of the memo is provided below:

U.S. Department of Homeland Security United States Coast Guard

Commander Eighth Coast Guard District Hale Boggs Federal Building 500 Poydras Street, Room 1313 New Orleans, LA 70130-3310 Staff Symbol: (dpb) Phone: (504) 671-2128 Fax: (504) 671-2133 D8DPBALL@uscg.mil

16591C March 9, 2012

THE WANGEMENT OF THE STATE OF T

Ms. Joy Giddens Environmental Permits Director Florida Department of Transportation P.O. Box 607 Chipley, Florida 32428

Dear Ms. Giddens:

We have reviewed your information package, pertaining to Florida Department of Transportation's proposed project crossing the Blackwater River at Milton, in Santa Rosa County, Florida. We understand that this bridge project may be federally funded.

As part of our project review, we received a Bridge project Questionnaire from the Finley Engineering Group, Inc., dated December 20, 2011 along with a site map and pictures of the proposed bridge site. Based on our observations and the information that was provided, as well as the fact that Federal funds may be utilized for this project, it appears that the waterway, at the site of the bridge, would meet the criteria for the Surface Transportation Act of 1978 (STAA). In such cases, FHWA has the responsibility for the STAA under 23 U.S.C. 144(h) and would make the determination as to whether or not a Coast Guard Bridge Permit would be required. Based on 23 CFR Part 650.805, a Coast Guard Bridge permit would not be required if the FHWA determines that the proposed construction, reconstruction, rehabilitation or replacement of the federally funded or federally assisted funded bridge crosses waterways which (1) are not used or are not susceptible for use in their natural condition, or by reasonable improvement as a means to transport interstate or foreign commerce; and (2) which are not tidal, or if tidal, used only by recreational boating, fishing, and or other small vessels less than 21 feet in length.

Should FHWA determine that Blackwater River, at the bridge location, meets the criteria for the STAA, the Coast Guard would accept that determination and the project would be exempt from Coast Guard Bridge Administration purposes. Therefore, I suggest that you contact the FHWA Division Administrator in Tallahassee, Florida, regarding this proposed bridge project, and that you request that FHWA review the proposed project to determine if it meets the criteria for the STAA.

Sincerely

If you have any questions or if we can be of additional assistance please contact our office.

DAVID M. FRANK

Chief of the Bridge Administration Branch

U. S. Coast Guard By direction

Copy: Mr. Martin C. Knopp, P.E., Division Administrator, FHWA, Tallahassee, FL



#### VI. CONCLUSION

Both alignment alternatives will impact wetlands. The impacts and functional UMAM loss are summarized in the following table:

Criteria	Alignment 1	Alignment 2
Direct Impact	34.64 Acres	30.62 Acres
Shading Impact	22.38 Acres	22.38 Acres
Indirect and Cumulative Impacts	139.40 Acres	134.01 Acres
Functional Loss (UMAM)	53.25 Units	50.60 Units

In order to avoid and minimize project related impacts, the Blackwater River and Clear Creek will be bridged, culverts will be used to connect impacted wetlands, and BMPs will be used to prevent impacts to wetlands outside of the construction boundary. Mitigation for unavoidable impacts can be accomplished by either using mitigation bank credits or Senate bill mitigation. Coordination with State and Federal regulatory agencies will be required for wetland impacts.

#### **Required Permits**

- 1. FDEP ERP Permit (For Wetlands and Stormwater Treatment)
- 2. FDEP SSL Authorization (Public Easement)
- 3. USACOE CWA Section 404 Dredge and Fill Permit
- 4. US EPA NPDES Permit



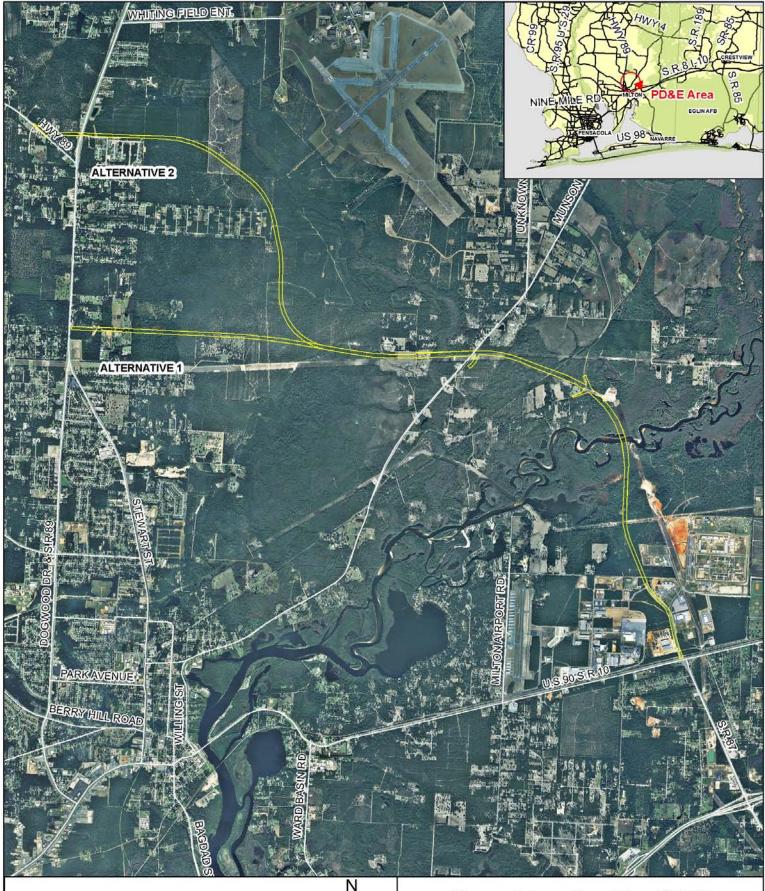
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		West test in a
SR 87 CONNECTOR		Wetland Evaluation Report
	Overall Figures 1-5	



## Legend:

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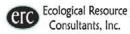
Alignments

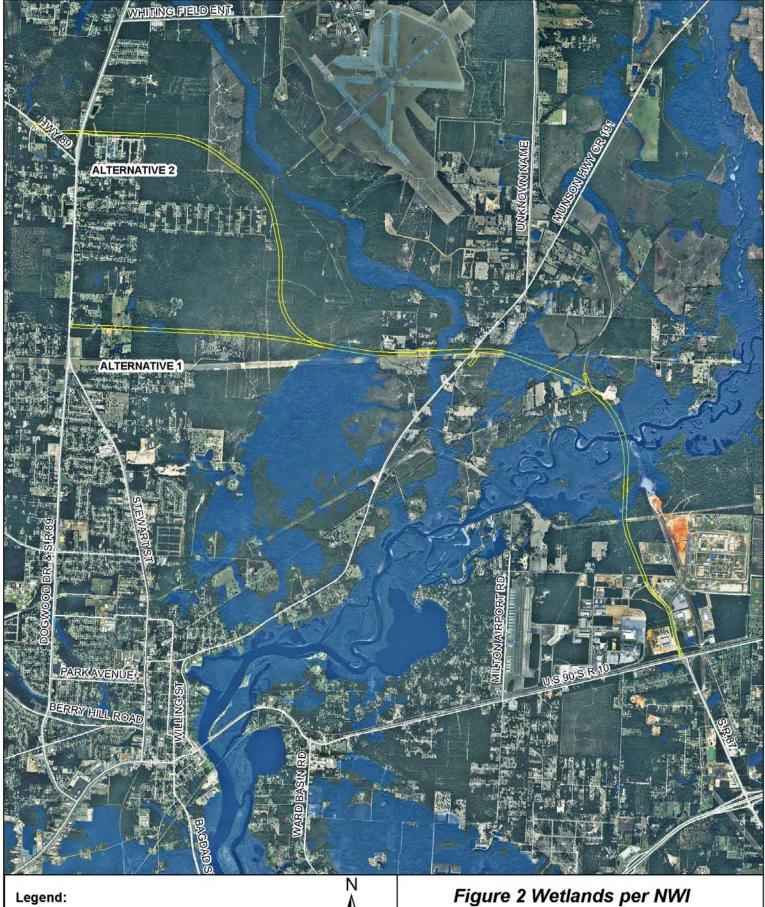
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12,000 \_\_\_\_Feet Figure 1 Location Map: SR 87
Alternative Alignments









National Wetlands Inventory (USFWS, 2010)

8,000

Alignments

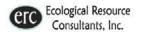
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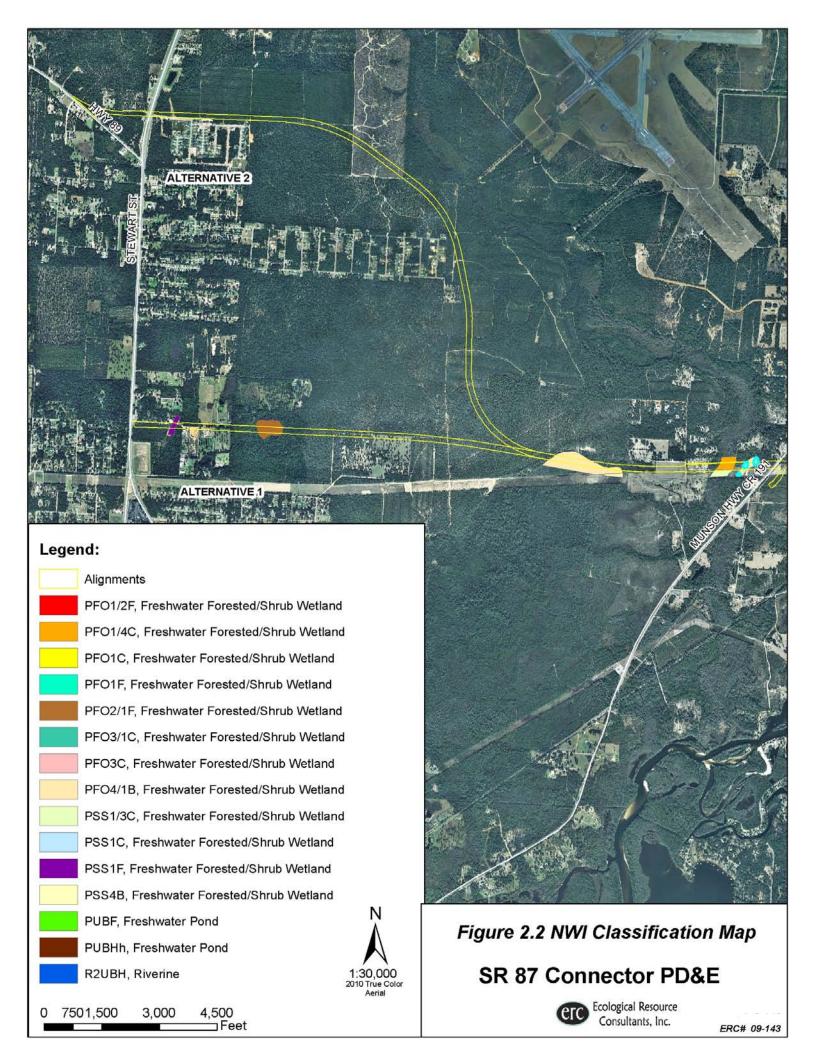
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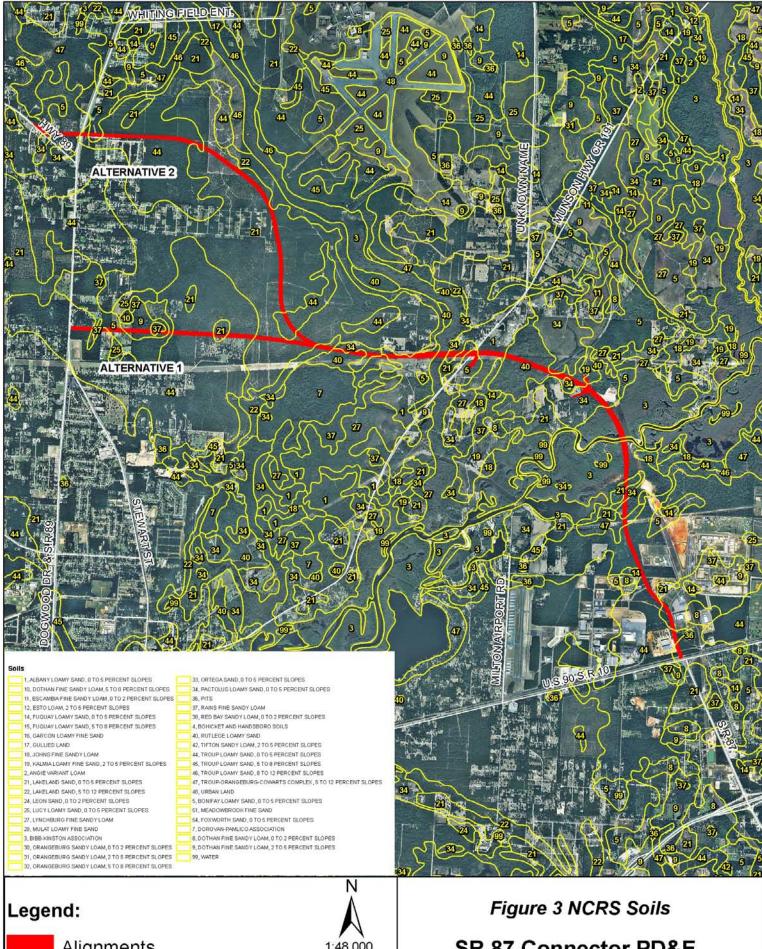
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**SR 87 Connector PD&E** 









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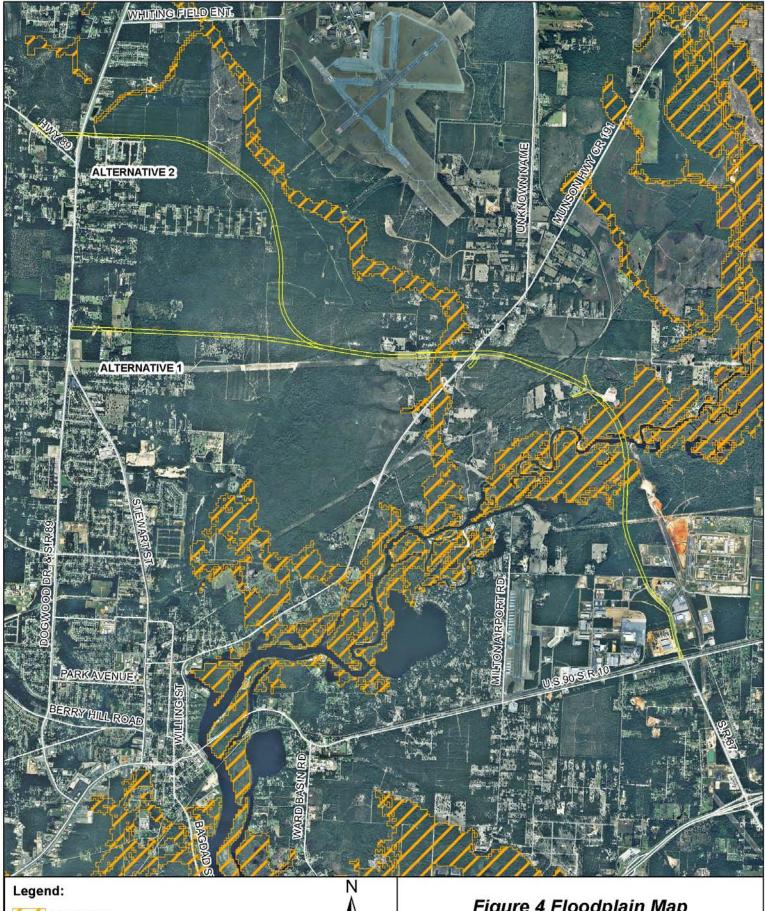
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**SR 87 Connector PD&E** 



ERC# 09-143





\*FNAI, 2008

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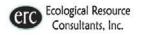
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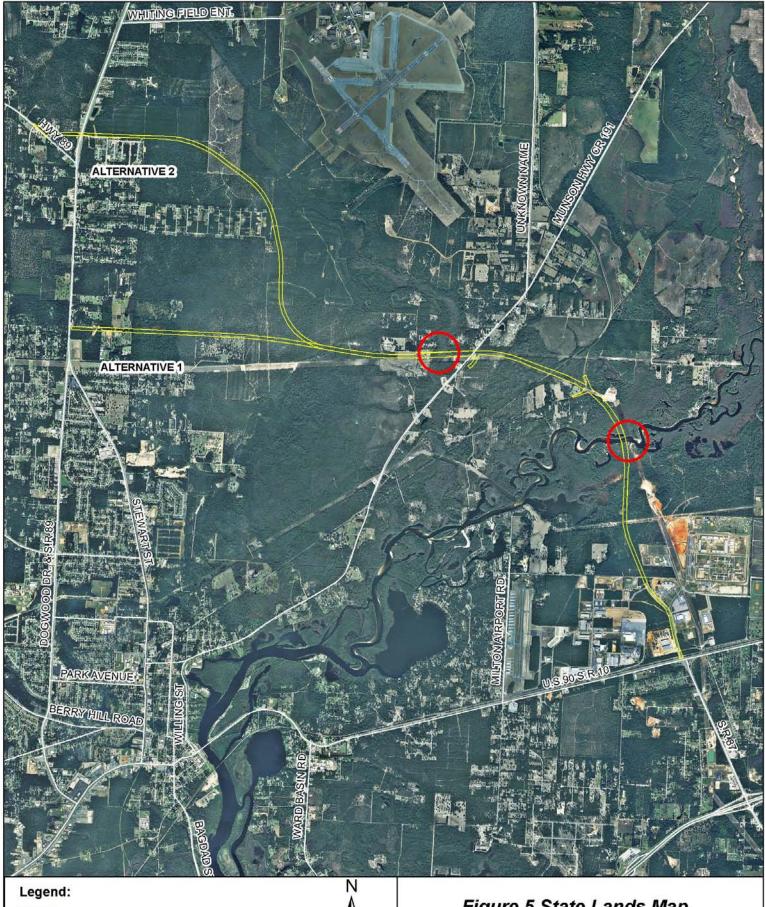
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## Figure 4 Floodplain Map

## **SR 87 Connector PD&E**



ERC# 09-143



Alignments

Sovereign Submerged Lands\*

8,000

\* See Appendix E

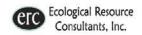
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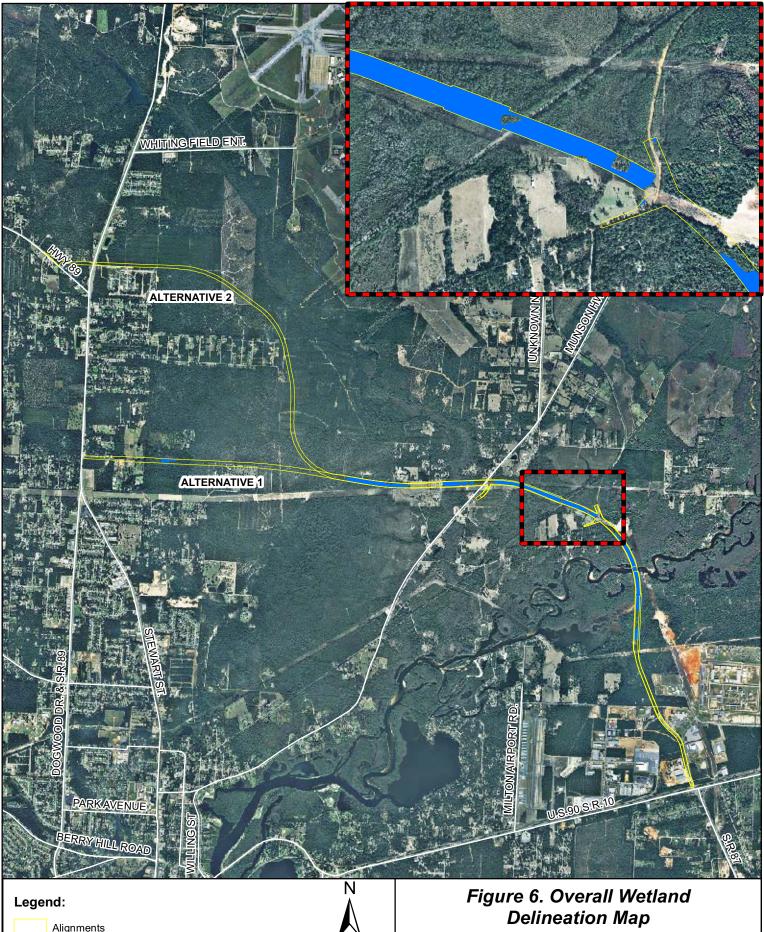
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Figure 5 State Lands Map

**SR 87 Connector PD&E** 



		Wetland Evaluation Report
SR 87 CONNECTOR		
	Wetland Delineation Figures 6 – 6.19	





Alignments

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**ERC Delineated Wetlands** 

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2010 True Color

**SR 87 Connector PD&E** 







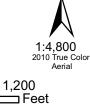


Figure 6.1 Wetland Delineation Map 1
SR 87 Connector PD&E



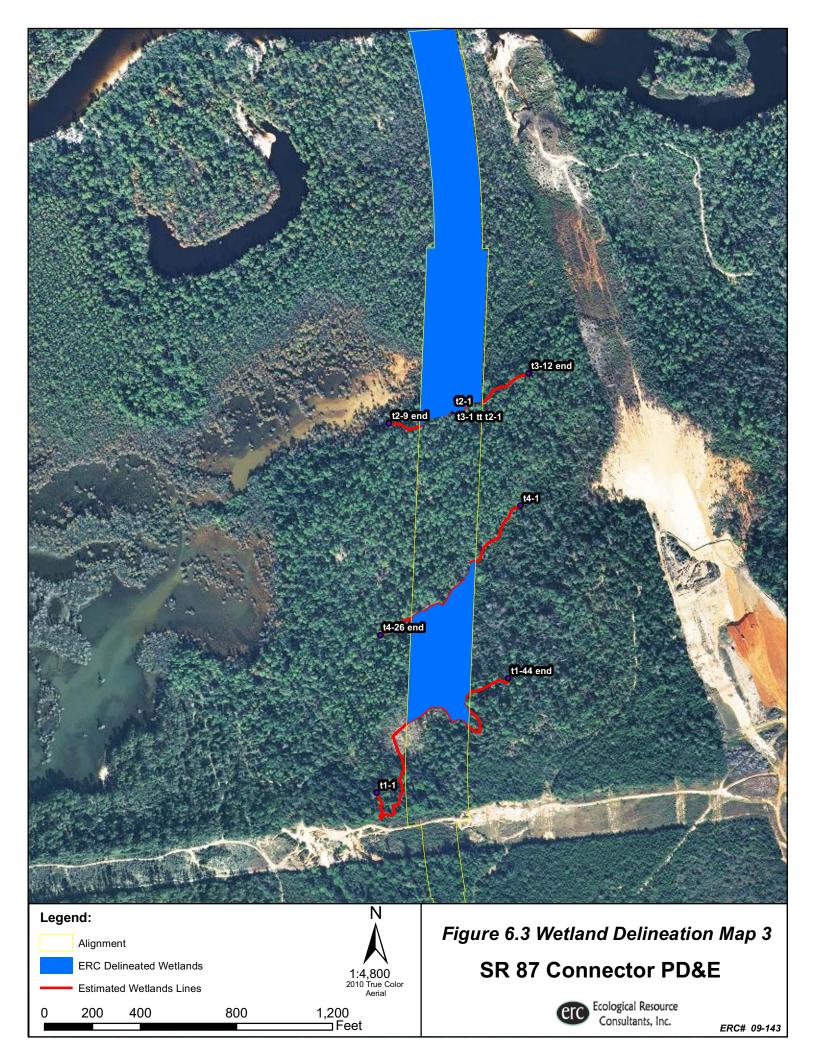


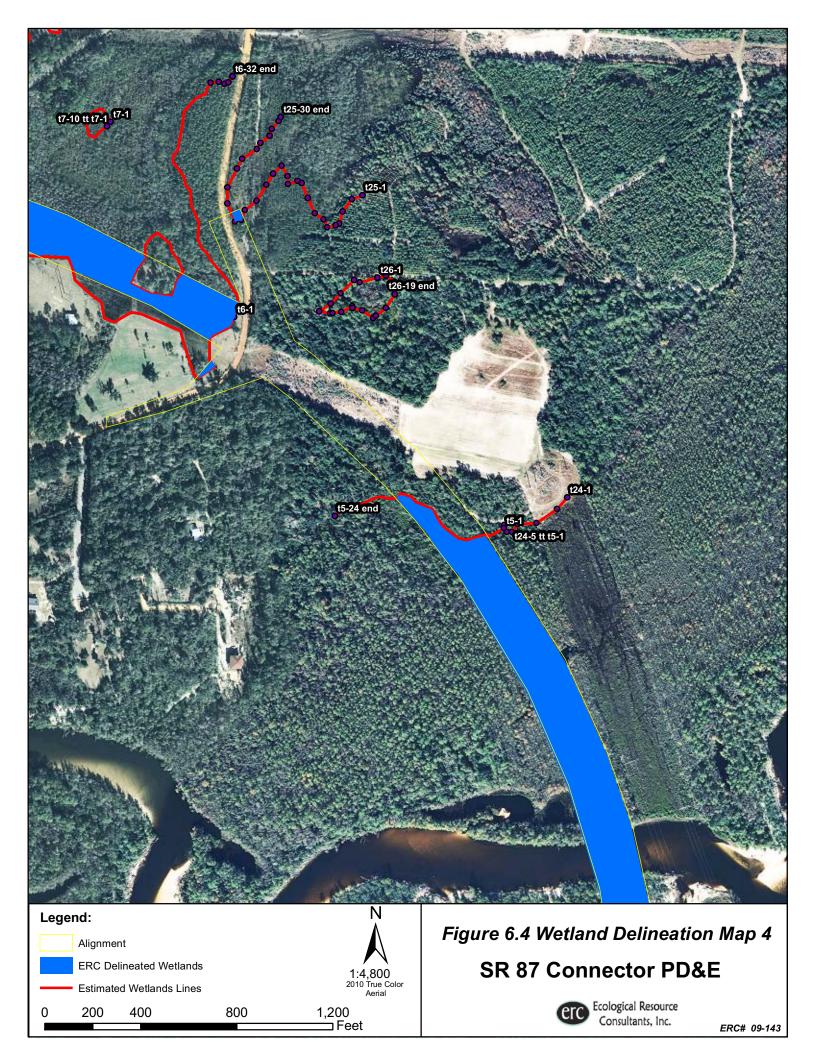


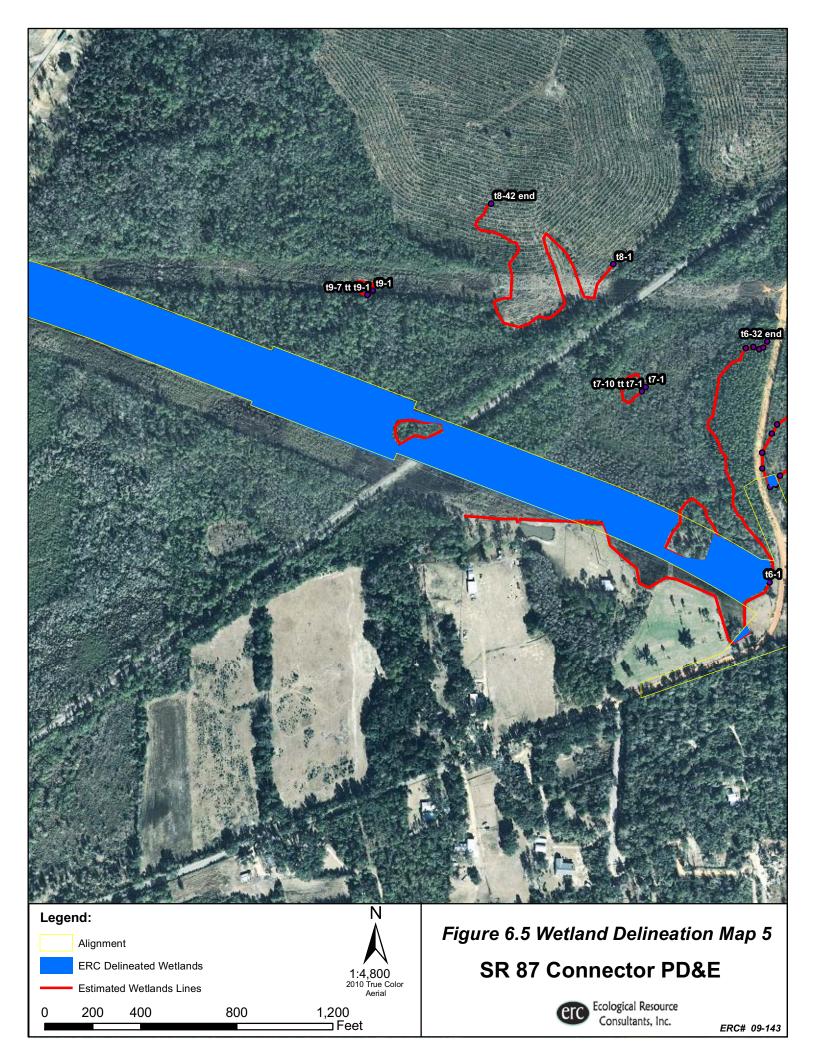


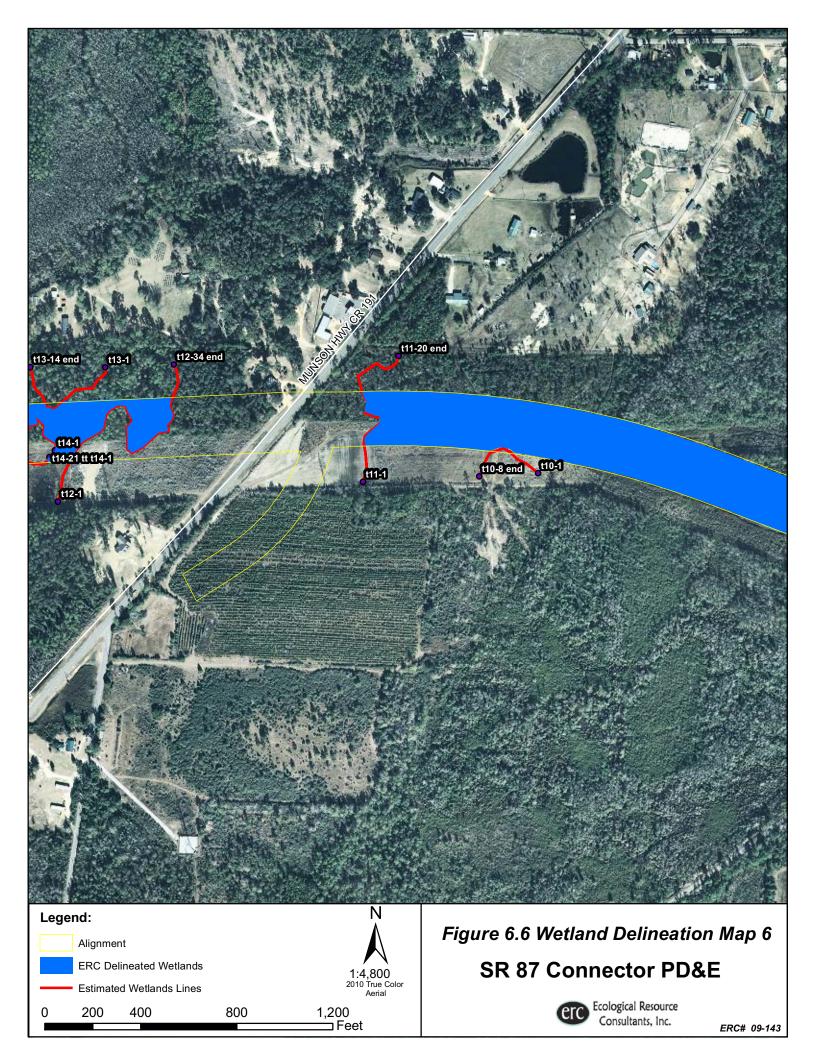
Figure 6.2 Wetland Delineation Map 2 SR 87 Connector PD&E

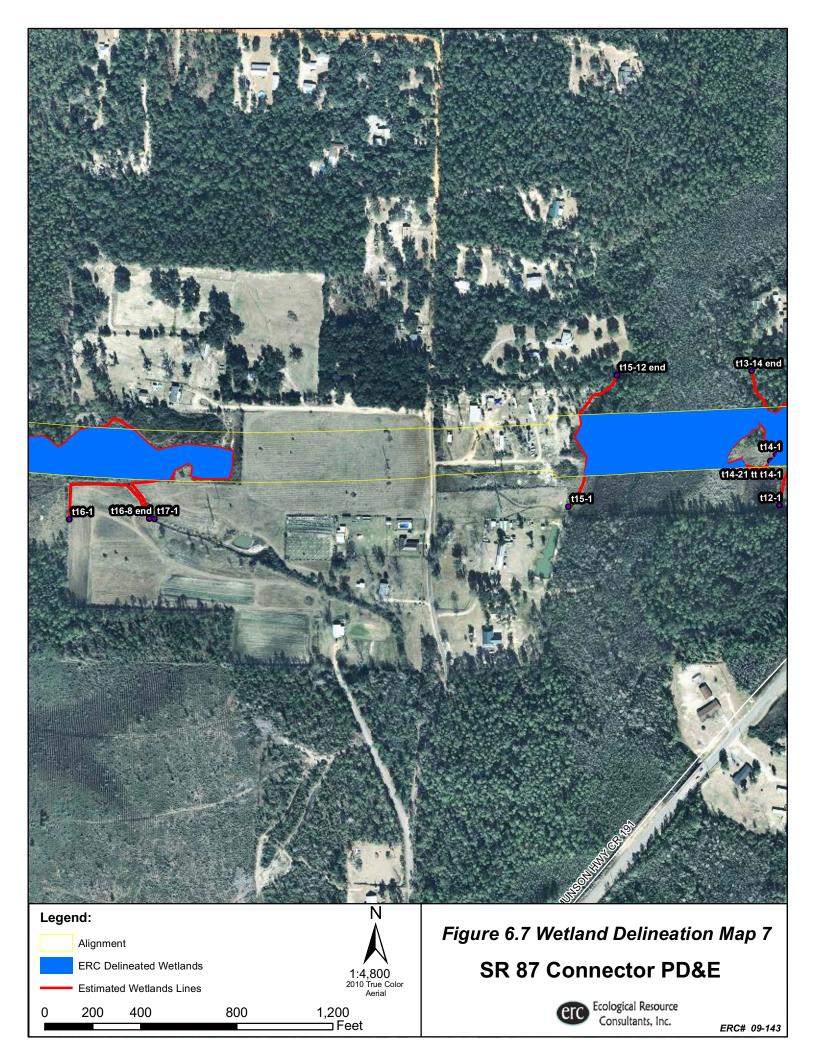


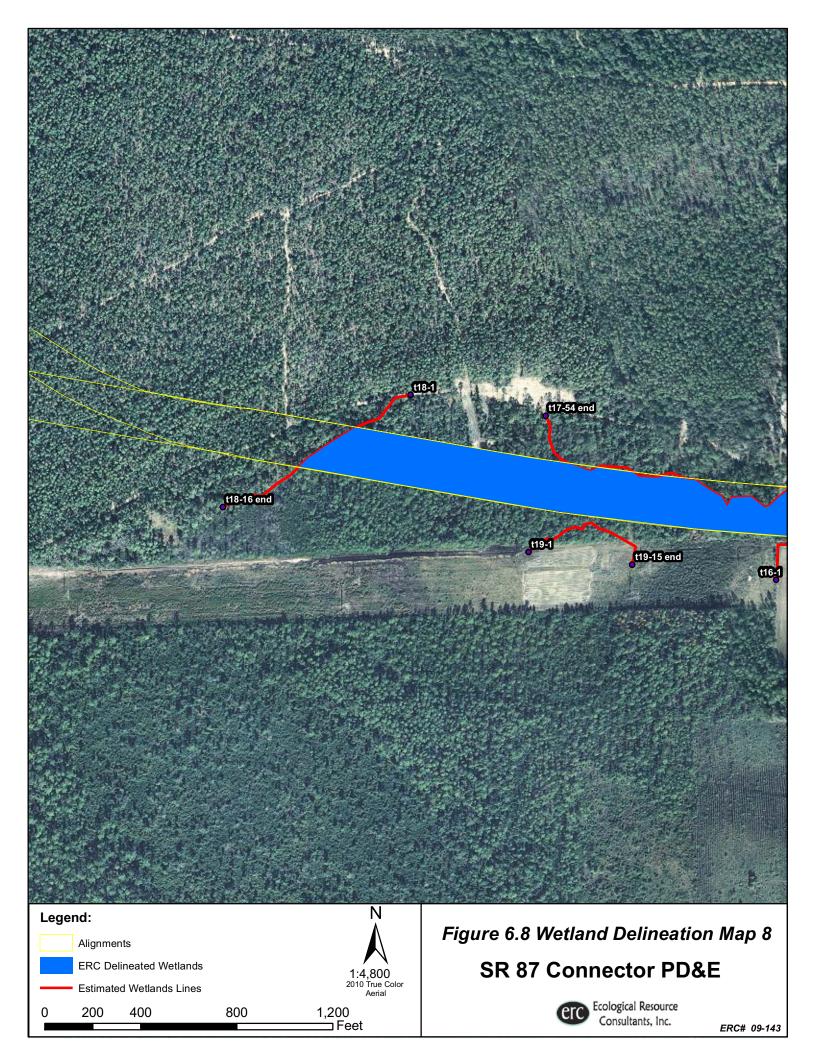


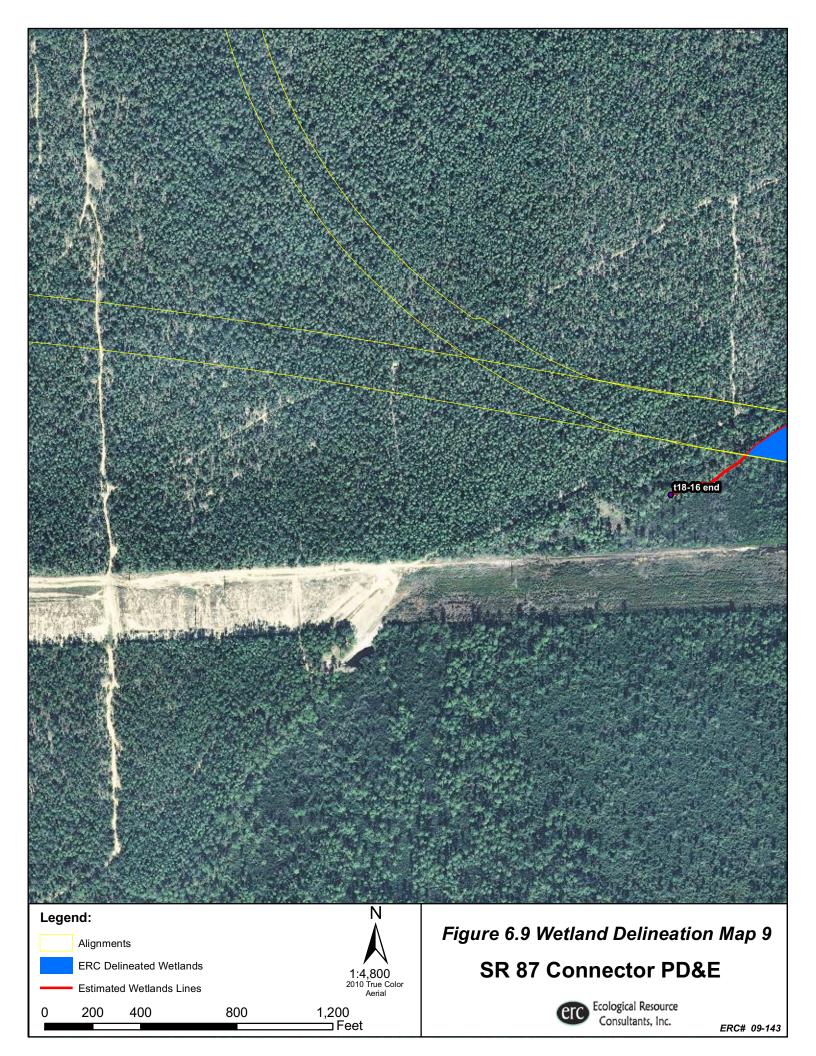


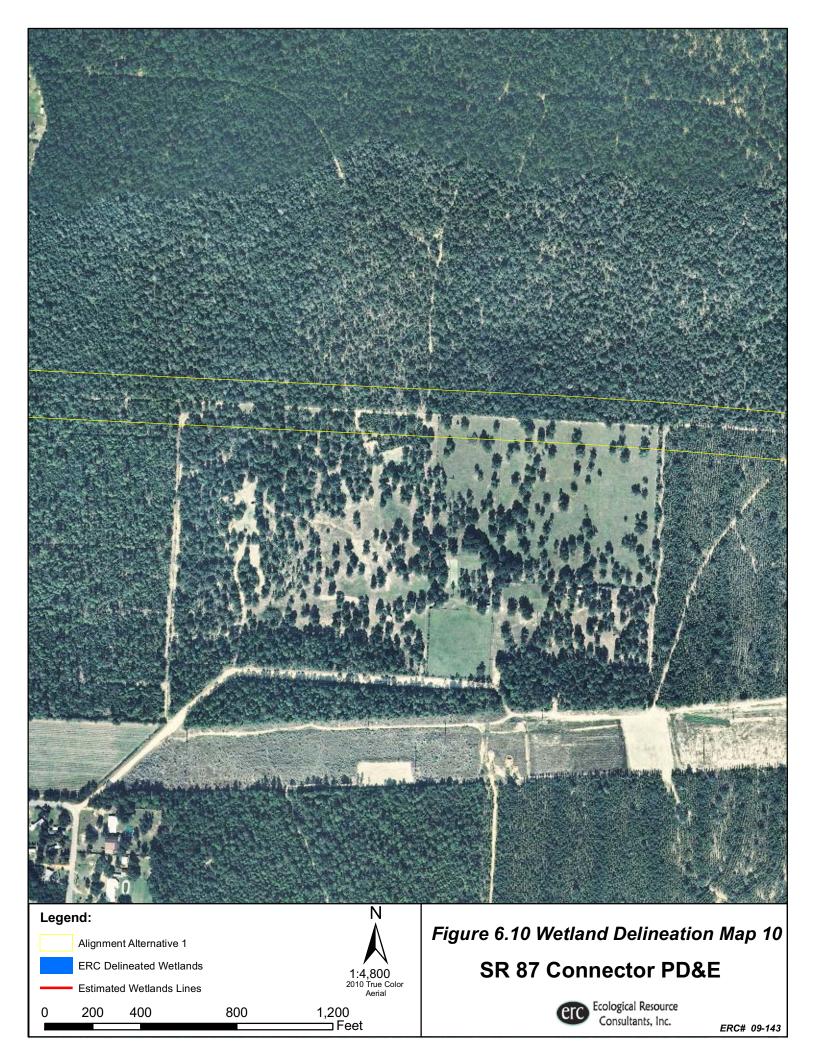


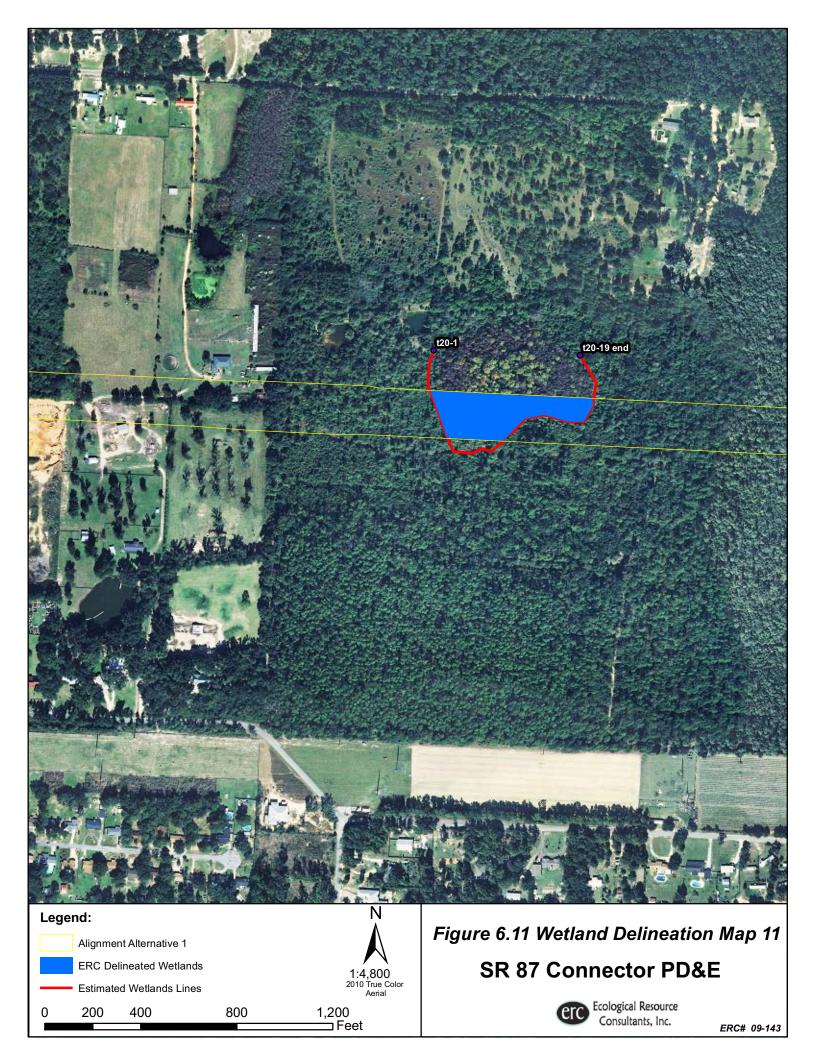










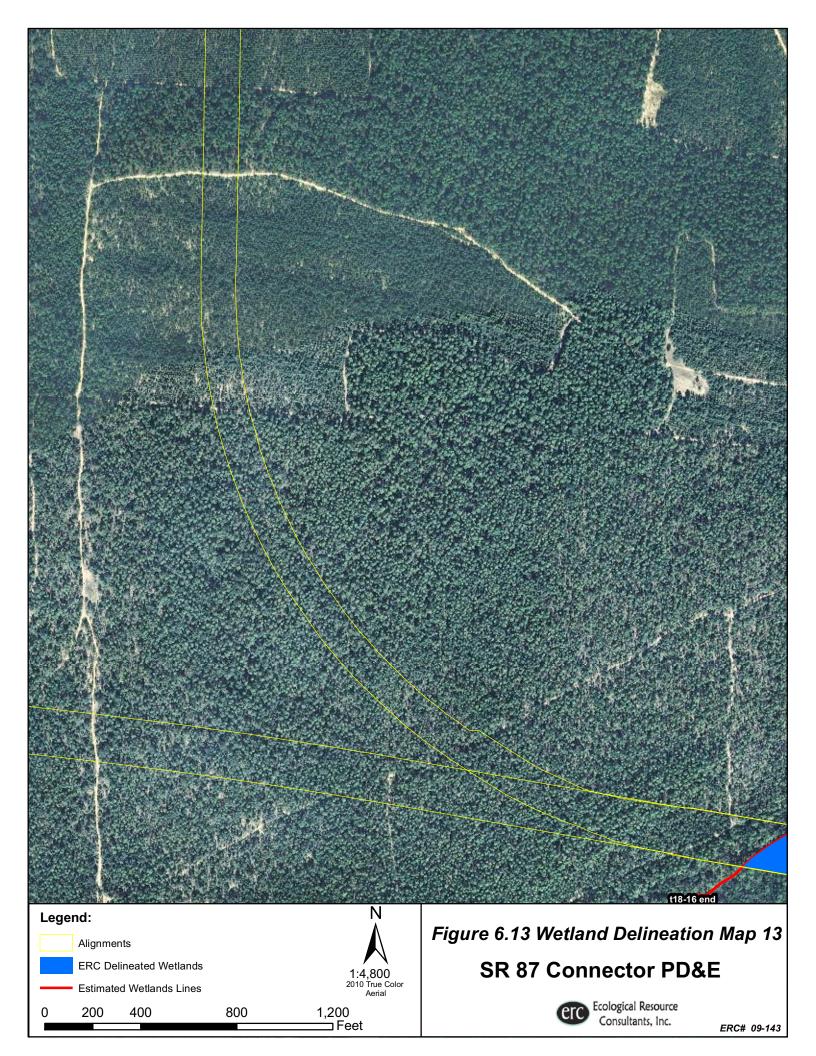


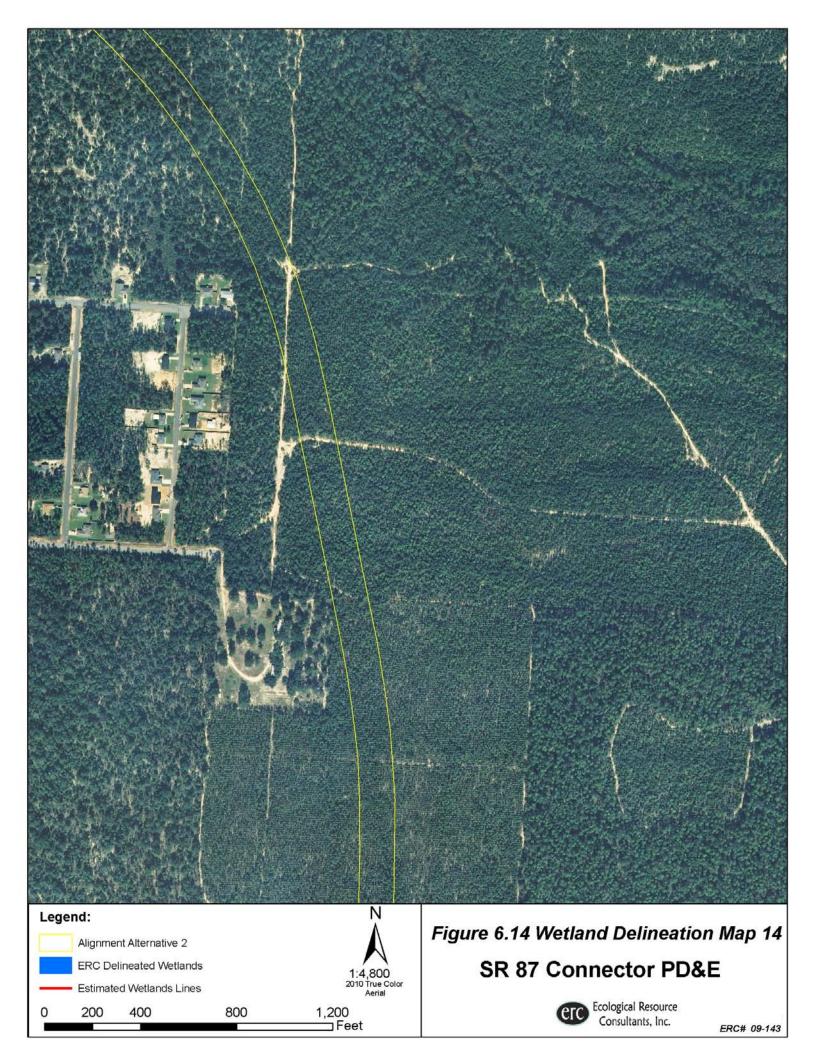


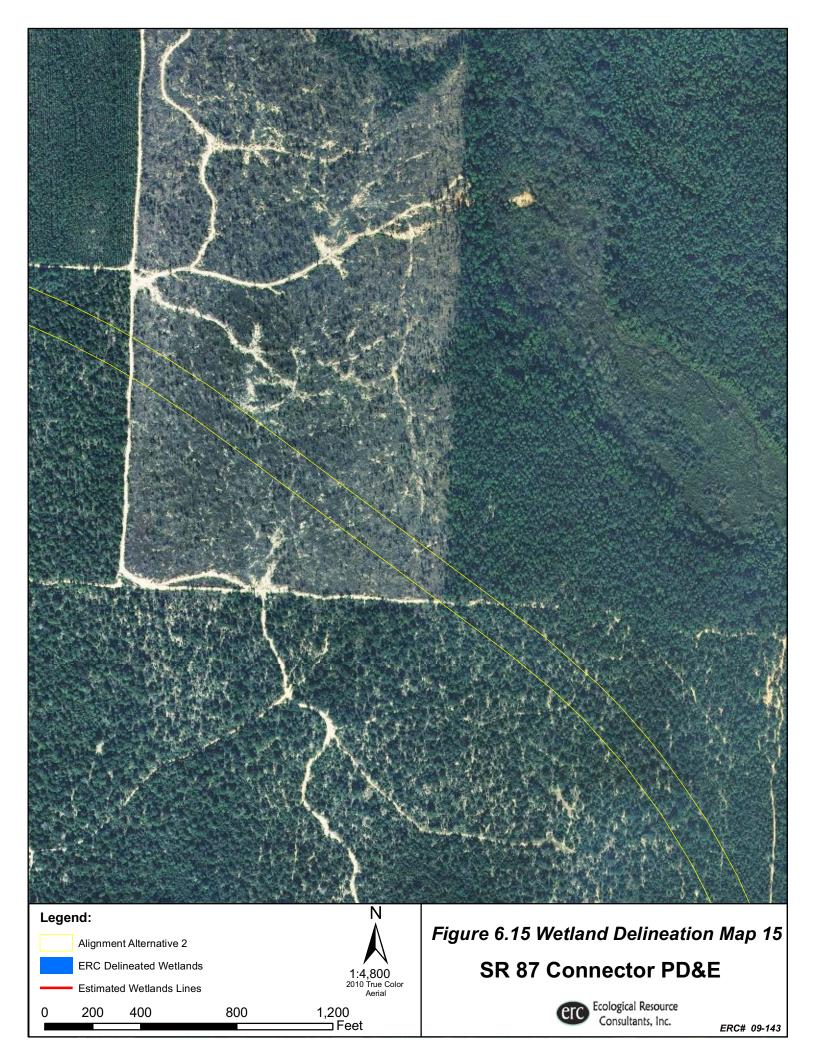
200

400

800









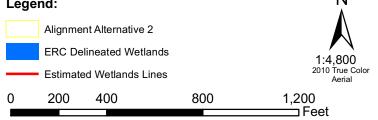


**ERC** Delineated Wetlands 1:4,800 2010 True Color Aerial **Estimated Wetlands Lines** 200 400 800 1,200 \_\_\_\_Feet

**SR 87 Connector PD&E** 

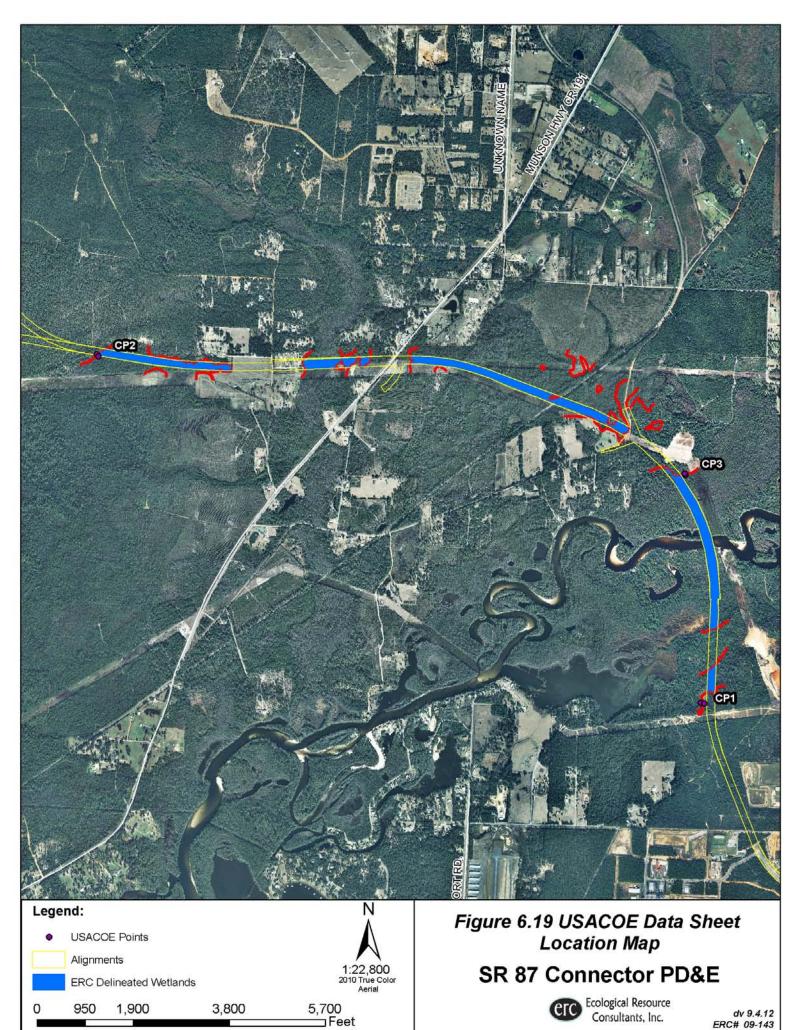






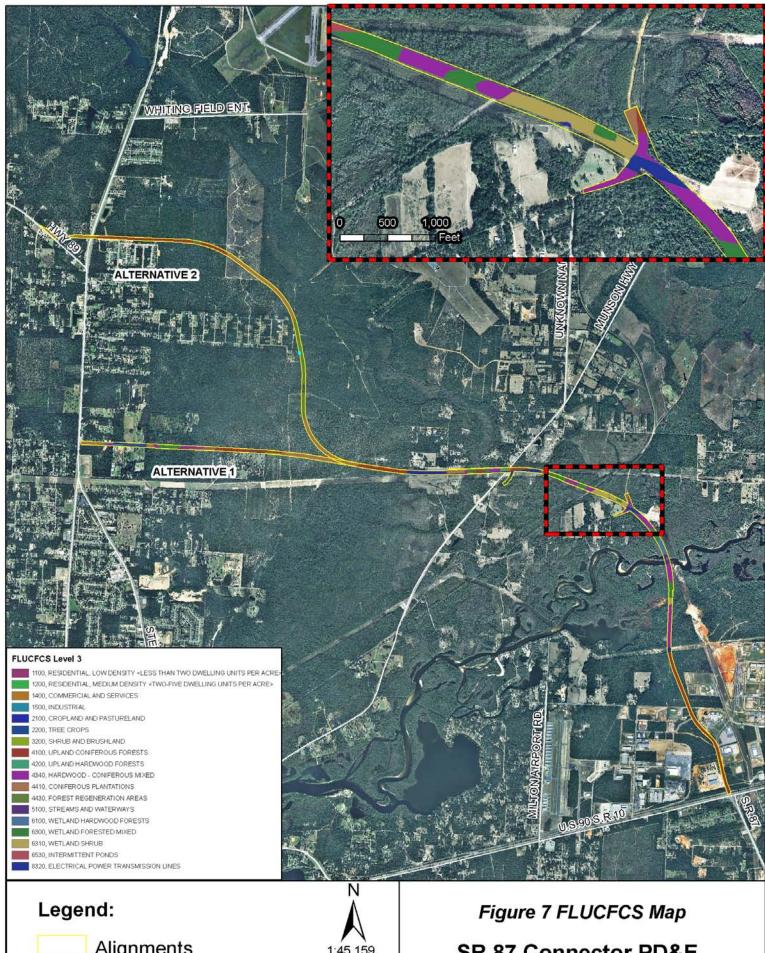
**SR 87 Connector PD&E** 





Ecological Resource
Consultants, Inc. dv 9.4.12 ERC# 09-143

SR 87 GONNECTOR	Wetland Evaluation Report
Wetland Classification / Assessment Figures 7	7-9
vectoria classification y rissessification y	





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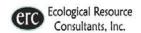
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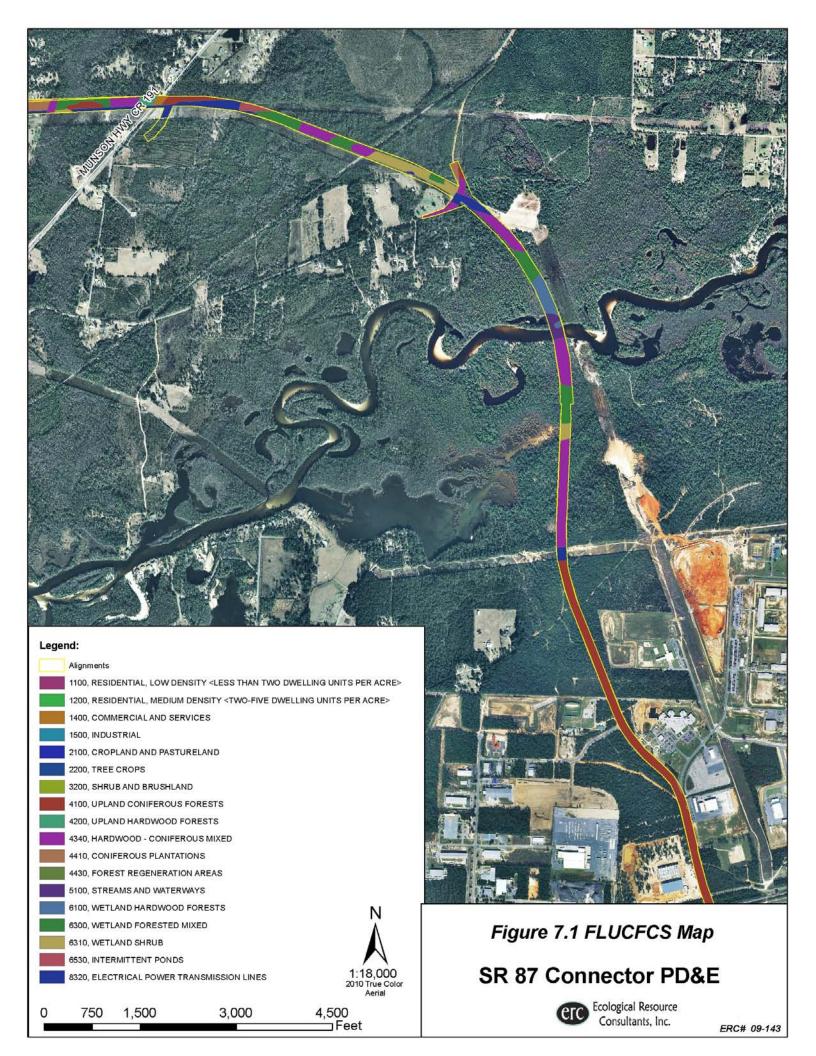
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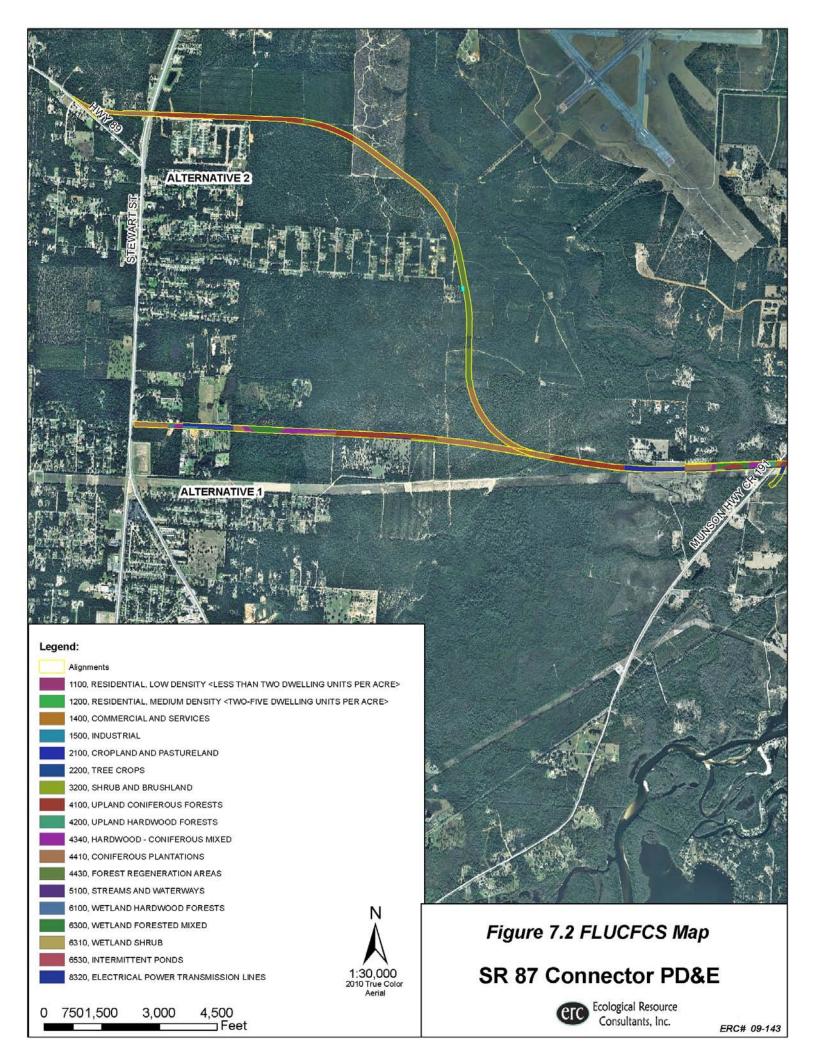


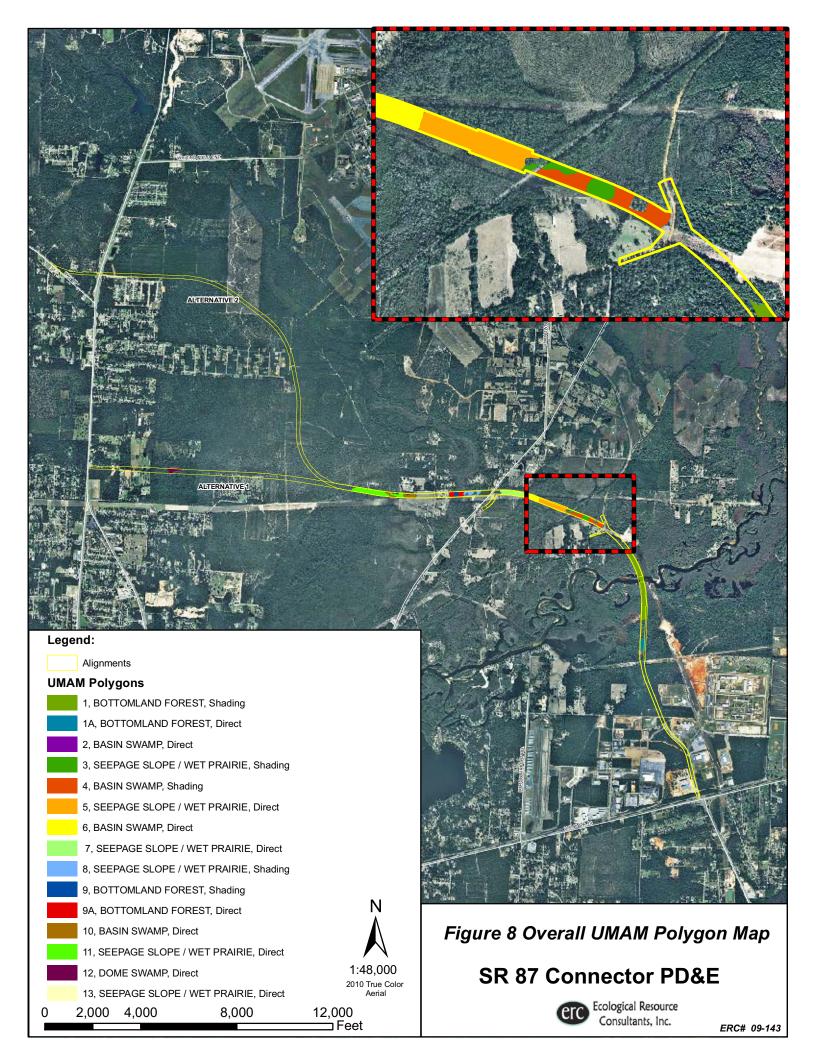
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**SR 87 Connector PD&E** 











## **UMAM Polygons**

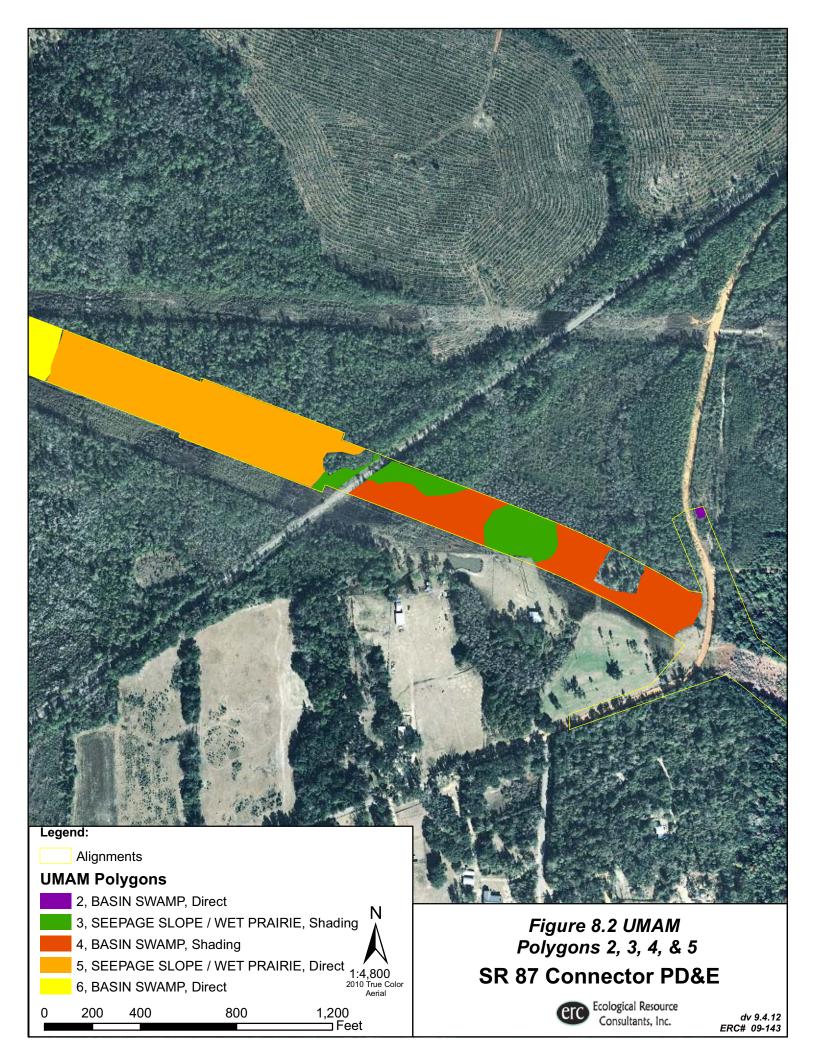
1, BOTTOMLAND FOREST, Shading

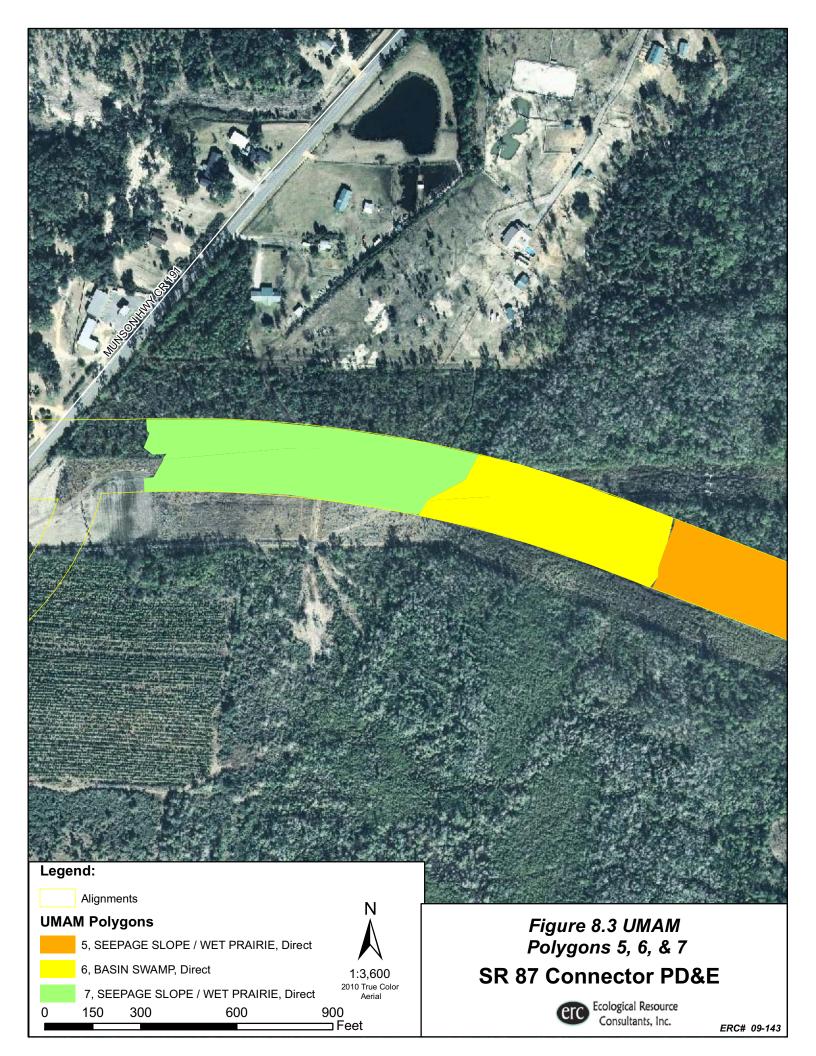
1A, BOTTOMLAND FOREST, Direct

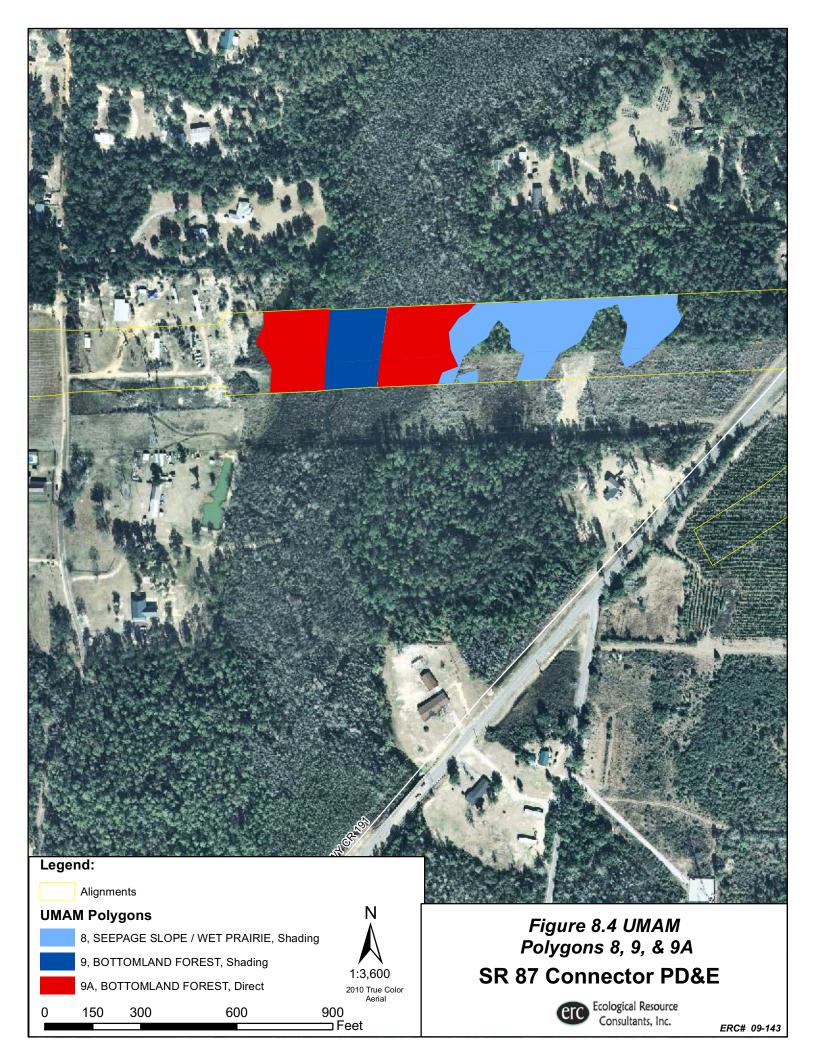
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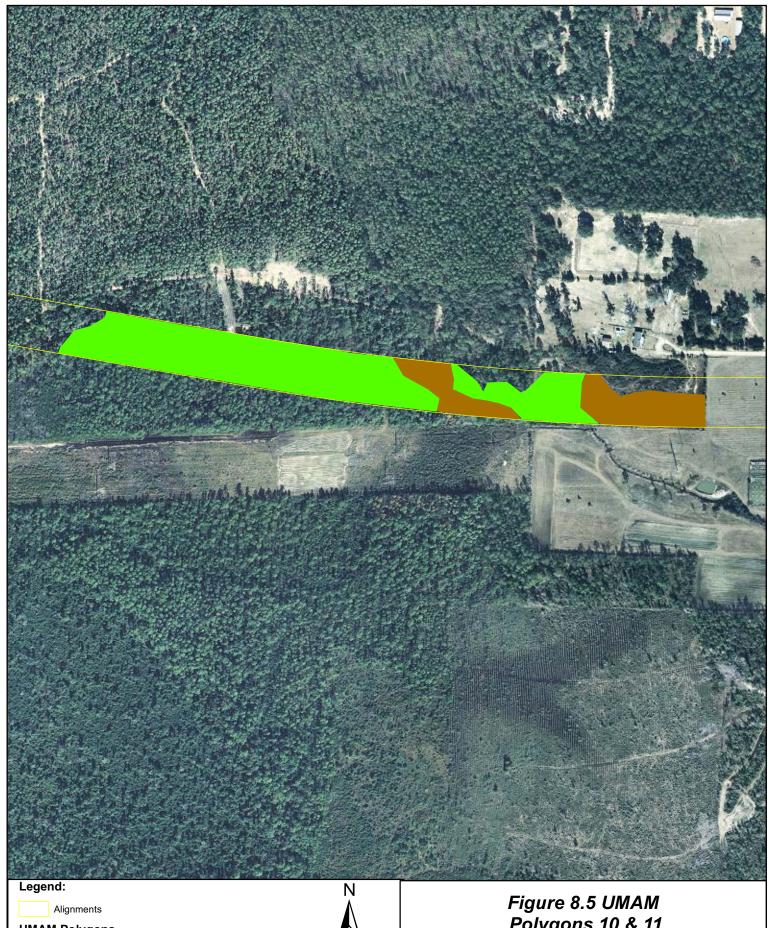
3,900 \_\_\_\_Feet Figure 8.1 UMAM Polygons 1A & 1

## **SR 87 Connector PD&E**









**UMAM Polygons** 

10, BASIN SWAMP, Direct

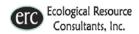
11, SEEPAGE SLOPE / WET PRAIRIE, Direct

200 400 800

1,200 \_\_\_\_Feet

1:4,800 2010 True Color Aerial

Figure 8.5 UMAM Polygons 10 & 11 **SR 87 Connector PD&E** 





150

300

600

900 ☐ Feet



Alignment Alternative 1

**UMAM Polygons** 

13, SEEPAGE SLOPE / WET PRAIRIE, Direct

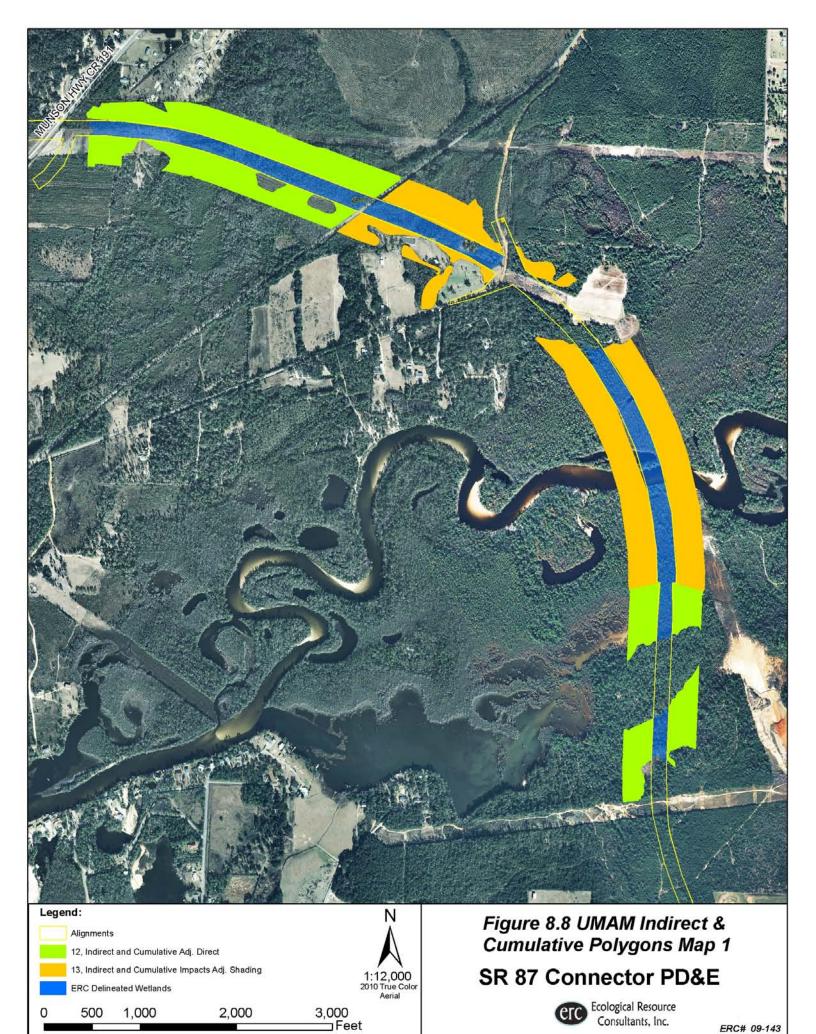
50 100 200

1:1,200 2010 True Color Aerial 300

⊐ Feet

Figure 8.7 UMAM Polygon 13 **SR 87 Connector PD&E** 

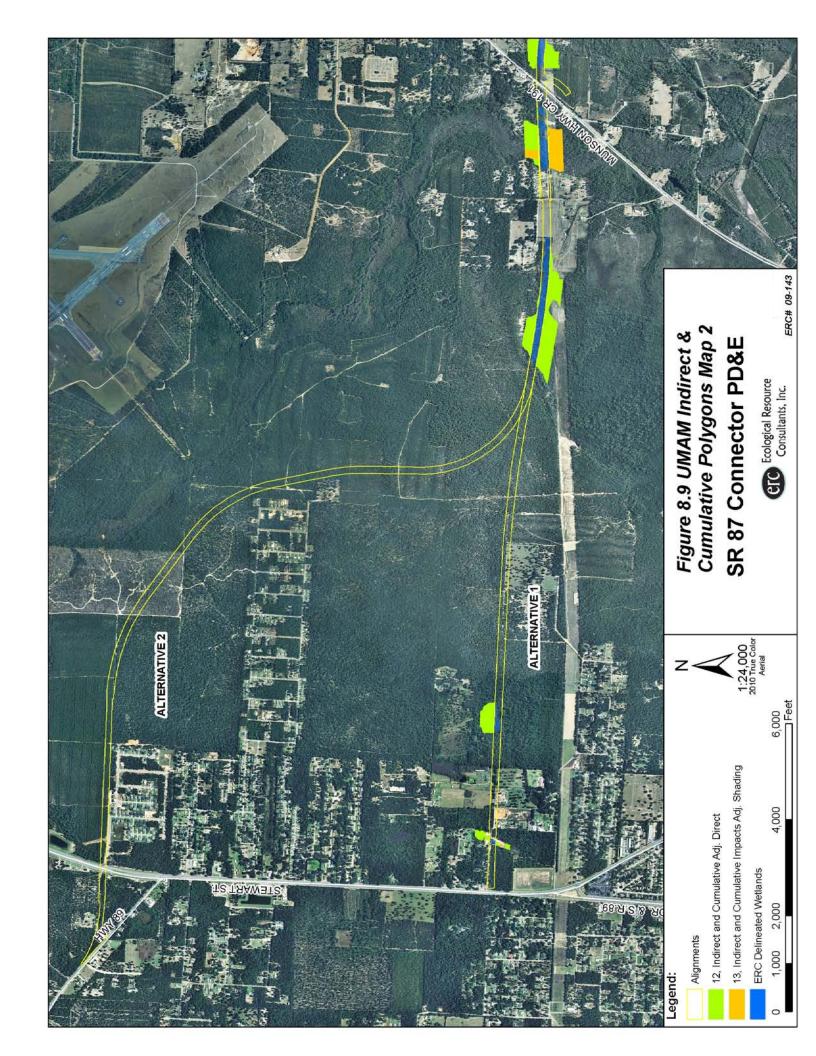


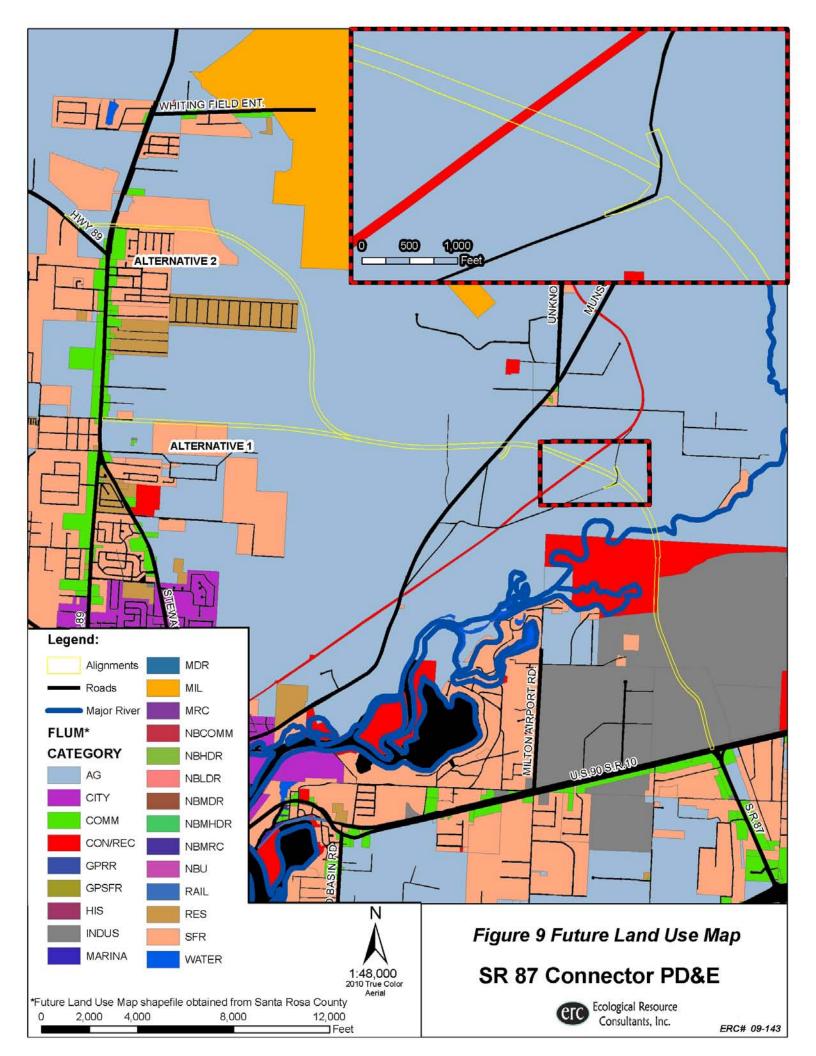


1,000

500

2,000





Wetland	Evaluation	Report
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## Appendix A

**USACOE** Wetland Determination Data Forms

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SR 87 Connector PD&E	c	ity/County: Santa Rosa	Sampling Date: Sep 13, 2011
Applicant/Owner: FDOT		State: Florida	Sampling Point: CP1-A
Investigator(s): Todd Campbell	Se		
		relief (concave, convex, none): none	Slope (%):
Subregion (LRR or MLRA): LRR P	Lat: 30*39'4.7" N	Long: 86°58'51.1" W	Datum: NAD 83
Soil Map Unit Name: Bibb/Kriston Association	<u> </u>	NWI Classification:	
Are climatic / hydrologic conditions on the site typi	cal for this time of year?	Yes X No (If no, explain in	Remarks.)
Are Vegetation, Soll, or Hydrology _	significantly disturbed?	Are "Normal Circumstances	e"present? Yes_X_ No
Are Vegetation, Soil, or Hydrology _	naturally problematic?		
SUMMARY OF FINDINGS – Attach sit	e map showing samp	ling point locations, transec	ets, important features, etc.
	Yes X No		
		Is the Sampled Area	
	Yes X No	within a Wetland? Yes	No
Remarks:	100 <u>X</u> 100		
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary II	ndicators (minimum of two required)
Primary Indicators (minimum of one is required; of X Surface Water (A1)	check all that apply) Aquatic Fauna (B13)	Surface	Soil Cracks (B6)
High Water Table (A2)	Marl Deposits (B15) (LI	RR U) X Drainao	y Vegetated Concave Surface (B8) le Patterns (B10)
X Seturation (A3) X Water Marks (B1)	X Oxidized Rhizospheres	(C1) Moss T	rim Lines (B16)
X Sediment Deposits (B2)	Presence of Reduced In	ron (C4) Crayfish	ason Water Table (C2) n Burrows (C8)
Drift Deposits (B3) Algal Mat or Crust (B4)	Recent Iron Reduction   Thin Muck Surface (C7)	in Tilled Soils (C6) Saturati	on Visible on Aerial Imagery (C9)
Iron Deposits (B5)	Other (Explain in Rema	urks) Geomol	rphic Position (D2) Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)  X Water-Stained Leaves (B9)		X FAC-Ne	outral Test (D5)
Field Observations;		Spriagri	um moss (D8) (LRR T, U)
Surface Water Present? Yes X No	Denth (inches):		
l .	Depth (inches): 2 inches	<del></del>	
	Depth (inches): Surface	Wetland Hydrology Presen	nt? Yes X No
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitor	ing well, aerial photos, previo	ous inspections), if available:	
Remarks:			

Sampling Point CP1-A	Sampling	Point	CP1-A
----------------------	----------	-------	-------

	A Long Long			Dominance Test worksheet:
Tree Stratum (Plot size:	Absolute % Cover	Dominant Species?		
Magnolia virginiana (Magnolia,sweetbay)	25	Y		Number of Dominant Species
Nyssa biflora (Tupelo,swamp)	25	·	FACW	That Are OBL, FACW, or FAC:11 (A)
Pinus elliottii (Pine,slash)	2		OBL	Total Musches of Book
Quercus nigra (Oak,water)			_FACW	Total Number of Dominant Species Across All Strata: 11 (B)
		·	FAC	Species Across All Strata: 11 (B)
				Percent of Dominant Species
6		. ——		That Are OBL, FACW, or FAC:100 (A/B)
	54	= Total Co		(A/B)
50 % of total cover:27	20 %	of total cove	r. <u>10.8</u>	Prevalence Index worksheet:
				Total % Cover of: Multiply by:
Sapling Stratum (Plot size:)				OBL species x 1 =
Magnolia virginiana (Magnolia,sweetbay)	10	Y	_FACW_	. FACW species X 2 =
2. Nyssa biflora (Tupelo,swamp)	10_	Y	OBL	
Persea palustris (Bay, swamp)	2		_FACW_	
4				FACU species X 4 =
5				UPL species X 5 =
6				Column Totals: (A) (B)
	22	= Total Co	over	
50 % of total cover:11				5
				Prevalence Index = B/A =
Shrub Stratum (Plot size: )				Hydrophytic Vegetation Indicators:
Ilex coriacea (Holly,bay-gall)	10	Υ	FACW	1 - Rapid Test for Hydrophytic Vegetation
2. Myrica cerifera (Bayberry,southern)	10	Y	FAC	X 2 - Dominance Test is > 50%
2 Manaistra annual agus (Dhachana highbant)	~		FACW	3 – Prevalence Test is ≤ 3.0¹
A Assumbase (Affects and)	_		FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
# (I				
			FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
	31	= Total Co		Definitions of Vegetation Strata:
50 % of total cover: 15.5	20 % (	në tatal merre		_
	_	of total cove	r: <u>6.2</u>	
	_	oi total cove	r. <u>6.2</u>	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size:)	_			approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size:)  1. Osmunda cinnamomea (Fern,cinnamon)	2	Y	FACW	Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size:)	_			approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: )  1. Osmunda cinnamomea (Fern,cinnamon)  2. Woodwardia areolata (Chainfern,netted)	2	<u>Y</u> Y	FACW OBL	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
Herb Stratum (Plot size:)  1. Osmunda cinnamomea (Fern,cinnamon)  2. Woodwardia areolata (Chainfern,netted)  3.	2	<u>ү</u> <u>ү</u>	FACW	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines.
Herb Stratum (Plot size:)  1. Osmunda cinnamomea (Fern,cinnamon)  2. Woodwardia areolata (Chainfern,netted)  3.	2	<u> </u>	FACW	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
Herb Stratum (Plot size:)  1. Osmunda cinnamomea (Fern,cinnamon)  2. Woodwardia areoleta (Chainfern,netted)  3.  4.	2	<u>ү</u> <u>ү</u> <u>ү</u>	FACW	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines.
Herb Stratum (Plot size:)  1. Osmunda cinnamomea (Fern,cinnamon)  2. Woodwardia areolata (Chainfern,netted)  3. 4	2	<u>ү</u> <u>ү</u> <u>ү</u>	FACW	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
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Sampling Point: <u>CP1-A</u>

Profile Desc Depth	cription: (Describe to the dep Matrix	th needed to document the Redox Fea	indicator o tures	r confirm	the absenc	e of Indicators.)
(inches)	Color (moist) %	Color (moist) %	Type¹	Loc²	Texture	Remarks
0-4	10YR6/6		N/A	N/A	Sandy	coarse sand w/ small fragments from upslope deposition
4-6	10YR5/6		N/A	_ N/A	Sandy	
6-8	10YR6/6		N/A	N/A	Sandy	
8-12+	10YR4/1		N/A	N/A	Sandy	
Type: C=C	concentration, D=Depletion, RM	=Reduced Matrix, CS=Cove	ed or Coate	d Sand Gr	ains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
lydric Soll	Indicators:				India	cators for Problematic Hydric Solis <sup>3</sup> :
Histosol	(A1)	Polyvalue Below Sur	ace (S8) (LF	RR S. T. U		n Muck (A9) (LRR O)
— Histic Ep	ipedon (A2)	Thin Dark Suface (SS			_	n Muck (A10) (LRR S)
Black His		Loamy Gleyed Matrix				uced Vertic (F18) (outside MLRA 150A,
– Hydrogei	n Sulfide (A4)	Loamy Gleyed Matrix		•		Imont Floodplain Soils (F19) (LRR P, S,
	Layers (A5)	Depleted Matrix (F3)	(- –/			malous Bright Loamy Soils (F20)
_	Bodies (A6) (LRR P, T, U)	Redox Dark Surface	(F6)			VILRA 153B)
	cky Mineral (A7) (LRR P, T, U)	Depleted Dark Surface			-	
_	esence (A8) (LRR U)	Redox Depressions (				Parent Material (TF2)
_	ck (A9) (LRR P, T)	Marl (F10) (LRR U)	1 0)			/ Shallow Dark Surface (TF12)
	i Below Dark Surface (A11)		\	41	_ Otne	er (Explain in Remarks)
<del>-</del> '	irk Surface (A12)	Depleted Ochric (F11		· ·	<b>5</b> 1	
_	• •	Iron Manganese Mas			Indi	icators of Hydrophytic vegetation and
_	rairie Redox (A16) (MLRA 150A			U)	wetl	and hydrology must be present, unless
_	lucky Mineral (S1) (LRR O, S)	Delta Ochric (F17) (N			disti	urbed or problematic
_	leyed Matrix (S4)	Reduced Vertic (F18)		-		
	edox (S5)	Piedmont Floodplain			•	
	Matrix (S6) face (S7) (LRR P, S, T, U)	Anomalous Bright Lo	amy Soils (F.	20) (MLRA	149A, 1530	C, 153D)
Restrictive	Layer (if observed):		<del>-  </del>			
Type:			Hvd	ric Soil Pr	esant?	You Y No
Depth (in	nches):	<del></del>	11,70	iic ooli r i	0301111	YesX No
Remarks:		<del>_</del>				
итрріну Бе	gins below 6 inches due to depo	ositional Sediment from adjac	ent sandniii.	Seepage	stream we(i	and by definition.

### WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: SR 87 Connector PD&E	City/County: Santa Rosa Sampling Date: Sep 13, 2011
Applicant/Owner: FDOT	State: Florida Sampling Point: CP1-B
Investigator(s): Todd Campbell/Tim Stuhr	Section, Township, Range:
	Local relief (concave, convex, none): none Slope (%):
	30°39'4.6" N Long: 86°58'50,4" W Datum: NAD 83
Soil Map Unit Name: Bibb-Kinston Association	NWI Classification:
Are climatic / hydrologic conditions on the site typical for this I	of year? Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signific	
Are Vegetation, Soil, or Hydrology natural	
	(ii needed, explain any answers in Admarks.)
SUMMARY OF FINDINGS - Attach site man si	wing sampling point locations, transects, important features, etc.
The state of the s	wing sampling point locations, transects, important leatures, etc.
Hydrophytic Vegetation Present? Yes X	ls the Sampled Area
Hydric Soil Present? Yes	o X within a Wetland? Yes No
Wetland Hydrology Present? Yes	
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all the	DDIV) Surface Soil Cracks (B6)
	Fauna (B13) Sparsely Vegetated Concave Surface (B8) osits (B15) (LRR U) Drainage Patterns (B10)
Saturation (A3)  Hydro	osits (B15) (LRR U)  1 Sulfide Odor (C1)  Drainage Pattems (B10)  Moss Trim Lines (B16)
Water Marks (B1) Oxidiz	Rhizospheres on Living Roots (C3)  Dry-Season Water Table (C2)
	of Reduced Iron (C4) Crayfish Burrows (C8)
	ron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)  k Surface (C7) Geomorphic Position (D2)
Iron Deposits (B5) Other	coplain in Remarks) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	FAC-Neutral Test (D5)
	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No _X Depth (in	
Water Table Present? Yes No X Depth (in	! Watiang Hydrology Present? Yes No Y
Saturation Present? Yes No _X Depth (in	es): Wetland Hydrology Present? Yes No _X_
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, as	photos, previous inspections), if available:
Remarks:	

				Dominance Test worksheet:
	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)		Species?	Status	Number of Dominant Species
Magnolia grandiflora (Magnolia,large-flower)	15	Y	FAC	That Are OBL, FACW, or FAC: 7 (A)
2. Quercus hermispherica (Oak, laurel)	15	Y	UPL	
Oxydendrum arboreum (Sourwood)	10		F-14	Total Number of Dominant
4. liex opaca (Holly,american)	7		FAC	Species Across All Strata: 9 (B)
5. Diospyros virginiana (Persimmon,common)			FAC	
6. Pinus elliottii (Pine,slash)			FACW	Percent of Dominant Species
o. the one that the party	57	= Total Cov		That Are OBL, FACW, or FAC: 77.8 (A/B)
50 8/ of total course 20 5				
50 % of total cover: <u>28.5</u>	_ 20% c	of total cover:	11.4	Prevalence Index worksheet:
_ , _ , _ , _ , _ , _ , _ ,				Total % Cover of: Multiply by:
Sapling Stratum (Plot size:)				OBL species x 1 =
Quercus hemispherica (Oak, laurel)	10	Y	UPL	FACW species X 2 =
Ilex opaça (Holly,american)	5	Y	FAC	FAC angelies Wa
3. Magnolia grandiflora (Magnolia,large-flower)	5	Y	FAC	FAC species X 3 =
4. Fagus grandifolia (Beech)	_		FAC	FACU species X 4 =
				UPL species X 5 =
6				Column Totals: (A) (B)
	22			
50 % of total cover: 11	_ 20 % c	of total cover:	4.4	Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
Shrub Stratum (Plot size:)				
Ilex glabra (Ink-berry)	40	Y	FACW	1 - Rapid Test for Hydrophytic Vegetation
2. Ilex vornitoria (Yaupon)	15	Y	FAC	X 2 - Dominance Test is > 50%
3. Vaccinium elliottii (Blueberry,elliott)	15	Y	FAC	3 – Prevalence Test is ≤ 3.01
4 Vaccinium commhanum (Bluchara, highburgh)			FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Vaccinum corymbosum (blueberry, nighbush)     Osmanthus americanus (Devil-wood)	7			
			FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
6. Callicarpa americana (Beauty-berry,american)	5		FACU	be present, unless disturbed or problematic.
	97			Definitions of Vegetation Strata:
50 % of total cover: <u>48.5</u>	_ 20 %	of total cover:	19.4	Tree - Woody plants, excluding woody vines.
in —	_ 20 % 0	i total cover.	19.4	Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
Herb Stralum (Plot size:)	_			Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Herb Stralum (Plot size:) 1				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Herb Stralum (Plot size:)  1 2				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines.
Herb Stralum (Plot size:)  1  2  3				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
Herb Stratum (Plot size:)  1  2  3  4				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines.
Herb Stralum (Plot size:)  1. 2. 3. 4. 5.				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
Herb Stratum (Plot size:)  1. 2. 3. 4. 5.				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines,
Herb Stralum (Plot size:)  1. 2. 3. 4. 5.				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.
Herb Stralum (Plot size:)  1. 2. 3. 4. 5. 6. 7.				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including
Herb Stralum (Plot size:)  1. 2. 3. 4. 5. 6. 7.				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody
Herb Stralum (Plot size:)  1. 2. 3. 4. 5. 6. 7. 8.				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately
Herb Stralum (Plot size:)  1.     2.     3.     4.     5.     6.     7.     8.     9.     10.				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody
Herb Stralum (Plot size:)  1. 2. 3. 4. 5. 6. 7. 8.				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size:)  1 2 3 4 5 6 7 8 9 10 11		= Total Cov	er	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately
Herb Stralum (Plot size:)  1.     2.     3.     4.     5.     6.     7.     8.     9.     10.			er	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size:)  1 2 3 4 5 6 7 8 9 10 11 50 % of total cover:0		= Total Cov	er	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size:)  1 2 3 4 5 6 7 8 9 10 11		= Total Cov	er	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size:)  1 2 3 4 5 6 7 8 9 10 11 50 % of total cover:0		= Total Cov	er	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size:)  1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11.  50 % of total cover:0  Woody Vine Stratum (Plot size:)  1. Vitis rotundifolia (Grape.muscadine)		= Total Cover:		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size:)  1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11.  50 % of total cover:0  Woody Vine Stratum (Plot size:)  1. Vitis rotundifolia (Grape.muscadine)  2.		= Total Cov	rer 0 FAC	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.
Herb Stratum (Plot size:)  1		= Total Cover:	er 0 FAC	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.
Herb Stratum (Plot size:)  1		= Total Cover:	er 0 FAC	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic Vegetation
Herb Stratum (Plot size:)  1		= Total Cover:	er 0 FAC	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.
Herb Stratum (Plot size:)  1		= Total Cover:		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic Vegetation
Herb Stratum (Plot size:)  1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11.  50 % of total cover: 0  Woody Vine Stratum (Plot size:)  1. Vitis rotundifolia (Grape muscadine)  2. 3. 4. 5.		= Total Cover:	rer 0 FAC	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic Vegetation
Herb Stratum (Plot size:)  1		= Total Cover:	rer 0 FAC	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic Vegetation
Herb Stratum (Plot size:)  1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11.  50 % of total cover: 0  Woody Vine Stratum (Plot size:)  1. Vitis rotundifolia (Grape muscadine)  2. 3. 4. 5.		= Total Cover:	rer 0 FAC	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic Vegetation
Herb Stratum (Plot size:)  1		= Total Cover:	rer 0 FAC	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic Vegetation
Herb Stratum (Plot size:)  1		= Total Cover:	rer 0 FAC	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic Vegetation
Herb Stratum (Plot size:)  1		= Total Cover:	rer 0 FAC	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic Vegetation
Herb Stratum (Plot size:)  1		= Total Cover:	rer 0 FAC	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) In height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic Vegetation

Sampling Point: CP1-B

Profile Desc Depth	cription: (Describe Matrix	to the depth	needed to docu	ment the ir	ndicator o	r confirm	the absen	ce of indicator	5.)		
(inches)	Color (moist)	%	Color (moist)	%	Type	Loc²	Texture		Remark	's	
0-2	10YR6/3				N/A	N/A	Sandy		TTOTAL		
2-8	10YR5/6				N/A	N/A	Sandy				
8-12+	10YR4/4		<u></u>				Sandy	- <del></del>			
	101114/4				N/A	N/A	- t				
								_ <u></u>			
							_				
¹Type: C=C	oncentration, D=De	pletion, RM=I	Reduced Matrix, C	S=Covered	or Coate	d Sand Gr	ains.	<sup>2</sup> Location: PL:	Pore Linin	g, M=Ma	atrix.
Hydric Soil	Indicators:						Ind	lcators for Pro	olematic H	vdric Sc	oils <sup>3</sup> :
Histosol	(A1)		Polyvalue Be	elow Surfac	æ (S8) (Li	RR S. T. U		m Muck (A9) (L		,	
	ipedon (A2)		Thin Dark St				_	m Muck (A10) (			
Black His			Loamy Gley				. –	duced Vertic (F		a MIRA	150 A B)
	n Sulfide (A4)		Loamy Gley			-,		edmont Floodpla			
	Layers (A5)		Depleted Ma		~/			omalous Bright			(P, S, I)
_	Bodies (A6) (LRR F	TU	Redox Dark		8)				Loanly Son	15 (FZU)	
	cky Mineral (A7) (L		Depleted Da	,	•			(MLRA 153B)	-1 /TEO)		
_	esence (A8) (LRR L		Redox Depre				_	d Parent Materi			
	ck (A9) (LRR P, T)	"	_	-	"			ry Shallow Dark	-	F12)	
_	Below Dark Surfac	o (A11)	Marl (F10) (L	-	101 DA 45	41	_ Oti	her (Explain în F	(emarks)		
	rk Surface (A12)	æ (ATT)	Depleted Oc								
		MI DA 450AV	Iron Mangan				- In-	dicators of Hydr	ophytic veg	etation	and
	airie Redox (A16) (I		Umbric Surfa			U)	we	tland hydrology	must be pr	esent, u	nless
_	ucky Mineral (S1) (	LRR U, S)	Delta Ochric		_		dis	turbed or proble	matic.		
_	leyed Matrix (S4)		Reduced Ve								
ı <del></del>	edox (S5)		Piedmont Flo								
	Matrix (S6)		Anomalous I	Bright Loan	ny Soils (F	20) (MLRA	\ 149A, 15:	3C, 153D)			
_ Dark Sur	face (S7) (LRR P, \$	s, 1, u)									
	Layer (if observed	):		<del></del>							
Type:			_		Hyd	ric Soil Pr	esent?	Yes	_	No	X
Depth (in	iches):		<u> </u>								
Remarks:											

## WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: SR 87 Connector PD&E	_ City/County: Santa Rosa Sampling Date: Sep 16, 2011
Applicant/Owner: FDOT	State: Florida Sampling Point: CP2-A
Investigator(s): Todd Campbell / Tim Stuhg	_ Section, Township, Range:
Landform (hillslope, terrace, etc.) slope Lo	cal relief (concave, convex, none); none Slope (%);
Subregion (LRR or MLRA): LRR P Lat: 30°40′10″	N Long: 87*1'9.3" W Datum:
Soil Map Unit Name: Rutlege Loamy Sand	NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed	d? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrologynaturally problematic	? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	
Hydric Soil Present? Yes X No	is the Sampled Area
	163
Wetland Hydrology Present? Yes X No	
HYDROLOGY	
Wetfand Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)  Surface Water (A1)  Aquatic Fauna (B1)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15	(LRR U) Drainage Patterns (B10)
X   Saturation (A3)   Hydrogen Sulfide C   Water Marks (B1)   X   Oxidized Rhizospho	Odor (C1) Moss Trirn Lines (B16) eres on Living Roots (C3) Dry-Season Water Table (C2)
Sediment Deposits (B2) Presence of Reduc	ed Iron (C4) Crayfish Burrows (C8)
Algal Mat or Crust (B4) Thin Muck Surface	(C7) Geomorphic Position (D2)
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Other (Explain in R	Shallow Adultate (D3)
Water-Stained Leaves (B9)	X FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No _X Depth (inches):	
Water Table Present? Yes No _X Depth (inches):	
Saturation Present? Yes X No Depth (inches): 12 inc	Ches Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pi	revious inspections), if available:
Remarks;	
Tomaks.	
	,

				Dominance Test worksheet:
Tana Otantum (District	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)		Species?	Status	Number of Dominant Species
Magnolia virginiana (Magnolia,sweetbay)	25	<u> </u>	_FACW_	That Are OBL, FACW, or FAC:12 (A)
2. Cliftonia monophylla (Buckwheat-tree)	15	Y	OBL	
Cyrilla racemiflora (Cyrilla,swamp)	15	Y	FACW	Total Number of Dominant
4. Nyssa biflora (Tupelo,swamp)	15	Y	OBL	Species Across All Strata: 12 (B)
5. Persea palustris (Bay,swamp)	10		FACW	
6. Pinus elliottii (Pine,slash)	10		FACW	Percent of Dominant Species
The state of the s	90	= Total Cov		That Are OBL, FACW, or FAC: 100 (A/B)
50 % of total cover: 45				
50 % of total cover: 45	_ 20 % 0	f total cover	18	Prevalence Index worksheet:
				Total % Cover of: Multiply by:
Sapling Stratum (Plot size:)				OBL species x 1 =
Magnolia virginiana (Magnolia,sweetbay)		Y	FACW	FACW species X 2 =
Nyssa biflora (Tupelo,swamp)	15	Y	OBL	
3. Cyrilla racemiflora (Cyrilla,swamp)	10	Y	FACW	FAC species X 3 =
4. Persea palustris (Bay,swamp)	5		FACW	FACU species X 4 =
5.				UPL species X 5 =
6				
6				Column Totals: (A) (B)
	<u>45</u>	= Total Cov		
50 % of total cover: 22.5	_ 20 % o	f total cover	9	Prevalence Index = B/A =
Shrub Stratum (Plot size: )				Hydrophytic Vegetation Indicators:
Ilex cassine (Holly,dahoon)	20	Y	FACW	1 - Rapid Test for Hydrophytic Vegetation
Myrica cerifera (Bayberry,southern)	10	<u>'</u>	FAC	X 2 - Dominance Test is > 50%
				3 - Prevalence Test is ≤ 3.01
3. Ilex cassine (Holly,dahoon)	5		_FACW_	
4				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5				1
6.				Indicators of hydric soil and wetland hydrology must
	35	= Total Cov		be present, unless disturbed or problematic.
50 % of total cover: 17.5		f total cover		Definitions of Vegetation Strata:
30 % of total cover 17.5	_ 20%0	I LOLAI COVEI		
Hart Strature (D) at aires				Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size:)				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
	5	Y	FAC	(7:0 GH) of larger in diameter at preast neight (DBH).
2				Sapling - Woody plants, excluding woody vines,
3				approximately 20 ft (6 m) or more in height and less
4.				than 3 in. (7.6 cm) DBH.
				·
				Shrub - Woody plants, excluding woody vines,
				approximately 3 to 20 ft (1 to 6 m) in height.
7				
8				Herb - All herbaceous (non-woody) plants, including
9	_			herbaceous vines, regardless of size. Includes woody
10				plants, except woody vines, less than approximately 3 ft (1 m) in height.
11.				ore (1 m) in neight.
	5	= Total Cov		Woody vine - All woody vines, regardless of height.
50.0/ -54-4-1 0.5				three property and the property of the party
50 % of total cover: 2.5	_ 20% o	f total cover:		
Woody Vine Stratum (Plot size:)				
Smilax laurifolia (Greenbrier,laurel-leaf)	3	Y	FACW	
2. Vitis rotundifolia (Grape,muscadine)	3		FAC	
3.				
				Hydrophytic
4				Vegetation
5				Present? Yes X No
	6	= Total Cov	er	<u> </u>
50 % of total cover: 3	20 % 0	f total cover:	12	
00 % of total 00 for.		i total cover.		
Remarks: (Include photo numbers here or on a separate s	sheet.)			
	ĺ			

Sampling Point: CP2-A

Depth	Matrix	a tile debr	h needed to docu R	ment the Ir edox Featur	idicator o	r confirm (	the absenc	e of Indicators	.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc²	Texture		Remarks
0-2	10YR2/1		<del>-</del>		N/A	N/A	Mucky mineral		TOMENO
2-7	10YR4/1		10YR5/6		С	M	Sandy		
7-12+	10YR3/1	_			N/A	N/A	Sandy		
						1074	Dandy		
			·						
				- ——					
						—			
'Type: C=C	concentration, D=Depl	etion, RM=	Reduced Matrix, (	CS=Covered	or Coated	d Sand Gra	ins.	<sup>2</sup> Location: PL≃	Pore Lining, M=Matrix.
Hydric Soll	Indicators:						Indic	cators for Prob	lematic Hydric Solis <sup>3</sup> :
Histosol	(A1)		Polyvalue B					n Muck (A9) (Li	
Histic Ep	oipedon (A2)		Thin Dark S				2 cn	n Muck (A10) (L	RR S)
Black His	stic (A3)		Loamy Gley	ed Matrix (F	1) (LRR C	<b>)</b> )			8) (outside MLRA 150A,B)
Hydroge	n Sulfide (A4)		Loamy Gley	ed Matrix (F	2)				n Soils (F19) (LRR P, S, T)
	l Layers (A5)		Depleted Ma	atrix (F3)					oarny Soils (F20)
X Organic	Bodies (A6) (LRR P,	Γ, U)	Redox Dark	Surface (F6	S)			MLRA 153B)	
5 cm Mu	cky Mineral (A7) (LRI	R P, T, U)	Depleted Da	ark Surface	(F7)			Parent Materia	l (TF2)
Muck Pro	esence (A8) (LRR U)		Redox Depr	essions (F8	)			y Shallow Dark	
1 cm Mu	ck (A9) (LRR P, T)		Mari (F10) (	LRR U)				er (Explain in R	
Depleted	l Below Dark Surface	(A11)	Depleted Or	chric (F11) (	MLRA 151	1)	_	<b>,</b>	<b>-</b> ,
Thick Da	rk Surface (A12)		Iron Mangar	nese Masse	s (F12) (LI	RR O, P, T	) 3		
Coast Pr	airie Redox (A16) (MI	RA 150A)					⁻ind	icators of Hydro	phytic vegetation and nust be present, unless
Sandy M	lucky Mineral (S1) (LF	RR O, S)	Delta Ochrid			·	dist	<b>urbed or</b> probler	nust be present, uniess
Sandy G	leyed Matrix (S4)		Reduced Ve			A, 150B)			The city.
Sandy R	edox (S5)		Pledmont FI				A)		
Stripped	Matrix (S6)		Anomalous					C. 153D)	
Dark Sur	face (S7) (LRR P, S,	T, U)		•	•	, ,		-, 1002,	
	Layer (if observed):				Ī	<u></u> -			
Restrictive	Layer (II observeu).				Hydr	ric Soll Pre	cont?	Vac	V Na
Restrictive Type:	Layer (II observed).				- Inyai	iic Soil Fle	13 <del>0</del> 111.1	Yes	X No
			_					•	
Type:									
Type: Depth (in									
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## WETLAND DETERMINATION DATA FORM ~ Atlantic and Gulf Coastal Plain Region

Project/Site: SR 87 Connector PD&E	c	City/County: Santa Rosa	Sampling Date: Sen 16, 2011
Applicant/Owner: FDOT			Sampling Point: CP2-B
Investigator(s): Todd Campbell / Tim Stuhr	S		
Landform (hillslope, terrace, etc.) <u>hill slope</u>	Local	relief (concave, convex, none): no	one Slope (%):
Subregion (LRR or MLRA): LRR P	Lat: 30°40'10.4" N	N Long: 87°1'9,7" W	Datum: NAD 83
Soil Map Unit Name: Rutlege Loamy Sand		NWI Classification	
Are climatic / hydrologic conditions on the site typ			
Are Vegetation, Soil, or Hydrology _			
Are Vegetation, Soll, or Hydrology			
SUMMARY OF FINDINGS – Attach si	te map showing samp	•	•
Hydrophytic Vegetation Present?	Yes No _X_		
Hydric Soil Present?	Yes No _X	la the Sampled Area	
		within a Wetland? Ye	s No
Wetland Hydrology Present?  Remarks:	Yes No _X		
HYDROLOGY			
Wetland Hydrology Indicators:		Seconda	ry Indicators (minimum of two required)
Primary Indicators (minimum of one is required:		Surf	ace Soil Cracks (B6)
Surface Water (A1) High Water Table (A2)	Aquatic Fauna (B13) Marl Deposits (B15) (L	Spai	rsely Vegetated Concave Surface (B8)
Saturation (A3)	Hydrogen Sulfide Odor	r (C1) Mos	nage Patterns (B10) s Trim Lines (B16)
Water Marks (B1) Sediment Deposits (B2)	Oxidized Rhizospheres Presence of Reduced I		Season Water Table (C2) rfish Burrows (C8)
Drift Deposits (B3)	Recent Iron Reduction	in Tilled Soils (C6) Satu	ration Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Iron Deposits (B5)	Thin Muck Surface (C7 Other (Explain in Rema	7) Geo	morphic Position (D2) llow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Neme		-Neutral Test (D5)
Water-Stained Leaves (B9)		Sph:	agnum moss (D8) (LRR T, U)
Field Observations:			
	Depth (inches):	<del></del>	
1	Depth (inches):	Wetland Hydrology Pre	sent? Yes No _X
Saturation Present? Yes No _X (includes capillary fringe)			- NO _X
Describe Recorded Data (stream gauge, monito	ring well, aerial photos, previ	ous inspections), if available:	
Remarks:			
1			

amolio	a Point	CP2-	R

	Abastas	D!1	1	Dominance Test Worksheet:
Tree Stratum (Plot size: )	Absolute % Cover	Dominant Species?	Indicator	
Pinus palustris (Pine,long-leaf)		Species?	Status	Number of Dominant Species
		Y	FACU	That Are OBL, FACW, or FAC:6 (A)
2. Quercus virginiana (Oak,live)	7	<u>Y</u>	FACU	
Quercus Incana (Oak blue-jack)		Y	UPL	Total Number of Dominant
Quercus laevis (Oak, turkey)	7	Y	UPL	Species Across All Strata: 16 (B)
Quercus geminata (Oak,sand-live)	7	Y	UPL	Barret of B. A. Land
Quercus margaretta (Oak,sand-post)	2		UPL	Percent of Dominant Species
	37	= Total Co	ver	That Are OBL, FACW, or FAC: 37.5 (A/B)
50 % of total cover: 18.5	20 % c	of total cover	r: 7.4	Prevalence Index worksheet:
	_			Total % Cover of: Multiply by:
Sapling Stratum (Plot size: )				OBL species 0 x 1 = 0
Quercus gerninata (Oak, sand-live)	7	Υ	UPL	
Pinus palustris (Pine,long-leaf)	5	Y	FACU	FACW species 5
3 Ouerous nigra (Oak water)		<u> </u>	FAC	FAC species 43 X 3 = 129
Quercus hemispherica(Oak, laurel)	5	- <del>'</del> Y	UPL	FACU species 81 X 4 = 324
				UPL species 0 X 5 = 0
		<del></del>	<u>FACW</u>	
6				Column Totals: <u>129</u> (A) <u>463</u> (B)
	24	= Total Co		
50 % of total cover: 12	_ 20 % c	of total cover	r: <u>4.8</u>	Prevalence Index = B/A = 3.59
				Hydrophytic Vegetation Indicators:
Shrub Stratum (Plot size:)				
Ilex vomitoria (Yaupon)	15	Y_	FAC	1 - Rapid Test for Hydrophytic Vegetation
2. Vaccinium elliottii (Blueberry,elliott)	10	Y	FAC	2 - Dominance Test is > 50%
3. Serenoa repens (Palmetto,saw)	- 5		FACU	3 Prevalence Test is ≤ 3.0¹
4.				Problematic Hydrophytic Vegetation1 (Explain)
6.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
o	20	- T-4-1 O-		be present, unless disturbed or problematic.
50 0/ - f1-1-1 4 F	30	= Total Co		Definitions of Vegetation Strata:
50 % of total cover:15	_ 20 % c	of total cover	r: <u>     6                               </u>	
ll				Tree - Woody plants, excluding woody vines,
Herb Stratum (Plot size:)				approximately 20 ft (6 m) or more in height and 3 in.
Pteridlum aquilinum (Fern,bracken)	15	Y	_ FACU_	(7.6 cm) or larger in diameter at breast height (DBH).
Aristida stricta (Grass,pineland three-awn)	10	Υ	FAC	Sapling - Woody plants, excluding woody vines,
Pityopsis graminifolia (Aster, golden)	7	Y	FACU	approximately 20 ft (6 m) or more in height and less
4				than 3 in. (7.6 cm) DBH.
5.				Observito Anna di Anna
6.				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
7.				approximately 3 to 20 ft (1 to 6 m) in neight.
8.				Herb - All herbaceous (non-woody) plants, including
				herbaceous vines, regardless of size. Includes woody
				plants, except woody vines, less than approximately
10				3 ft (1 m) in height.
11				Woody vine - All woody vines, regardless of height.
	32	= Total Co		Troody wille - All woody villes, regardless of neight.
50 % of total cover:16	_ 20 % c	of total cover	r. <u>6.4</u>	
Woody Vine Stratum (Plot size:)				
Smilax laurifolia (Greenbrier,laurel-leaf)	3	Y	FACW	
Vitis rotundifolia (Grape,muscadine)	3	Y	FAC	
3.				Hydrophytic
4.				Vegetation
5.		_		Present? Yes No X
		= Total Co		
	6			
50 % of total cover: 3	_ 20 % c	of total cover	r: <u>       1.2                             </u>	
Remarks: (Include photo numbers here or on a separate	sheet )			
remains, (moduce priorio numbers note of on a separate	511 <b>55</b> (.)			

Sampling Point: CP2-B

Depth	cription: (Describe Matrix	<u> </u>	п <del>овава то доси</del> R	i <b>ment the</b> in <u>edo</u> x Featur	ui <b>cator</b> d es	or contirm	the absence	of Indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Type	Loc²	Texture	Re	marks	
0-3	10YR 6/2				N/A	_N/A	Sandy			
3-12+	10YR5/2				N/A	N/A	Sandy			
T			S-d							
Type: C=C	oncentration, D≔De	epietion, rtivi=i			or Coate	d Sand Gr	ains. 1	_ocation; PL=Pore	Lining, M=Ma	atrix. ———
-	Indicators:							itors for Problemat	tic Hydric S	olla³:
_ Histosol	•			elow Surface			) 1 cm	Muck (A9) (LRR O)		
_	ipedon (A2)			uface (S9) (I			2 cm	Muck (A10) (LRR S	)	
_ Black His			-	ed Matrix (F		<b>O</b> )		ced Vertic (F18) (ou		
	n Sulfide (A4)			ed Matrix (F.	2)			nont Floodplain Soil		R P, S, T
_	Layers (A5)		Depleted Ma				Алоп	nalous Bright Loarny	Soils (F20)	
_	Bodies (A6) (LRR F		_	Surface (F6	,		(M	LRA 153B)		
_	cky Mineral (A7) (L		_	ark Surface (	-		_	Parent Material (TF2	•	
_	esence (A8) (LRR l	-		ressions (F8)	)		Very	Shallow Dark Surfac	ce (TF12)	
_	ck (A9) (LRR P, T)		Marl (F10) (				Other	(Explain in Remark	s)	
	Below Dark Surface	ce (A11)	Depleted O	chric (F11) (I	VILRA 15	1)				
<del></del>	rk Surface (A12)			nese Masses			r) <sub>3Indic</sub>	ators of Hydrophytic	vegetation	and
_	airie Redox (A16) (		Umbric Surf	face (F13) (L	RR P, T,	U)	wetla	nd hydrology must b	oe present, u	nless
_ Sandy M	ucky Mineral (S1) (	LRR O, S)	Delta Ochrid	c (F17) (MLF	CA 151)		distu	bed or problematic.		
_ Sandy G	leyed Matrix (S4)		Reduced Ve	ertic (F18) (N	ILRA 150	A, 150B)				
_ Sandy Re	edox (S5)		Piedmont F	loodplain So	ils (F19) (	<b>MLRA 149</b>	(A)			
	Matrix (S6) face (S7) (LRR P,	S, T, U)	Anomalous	Bright Loam	y Soils (F	20) (MLRA	A 149A, 153C	, 153D)		
Restrictive	Layer (if observed	D):			1	_ <del></del>				
Туре:					E 0	ele Call D		V		
Depth (în	iches):	***************************************			Пуа	ric Soll Pr	esent?	Yes	No _	X
Remarks:			<del>-</del>		<u> </u>	<u>-</u>				
Ciliains.										

## WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: SR 87 Connector PD&E	City/County: Santa Rosa Sampling Date: Oct 5, 2011
Applicant/Owner: FDOT	State: Florida Sampling Point: CP3-A
Investigator(s): Todd Campbell / Tim Stuhr	Section, Township, Range:
Landform (hillslope, terrace, etc.) Hillslope	.ocal relief (concave, convex, none): none Slope (%):
Subregion (LRR or MLRA): LRR P Lat: 30°39'4	9.3" N Long: 86°59'23" W Datum: NAD 83
Soil Map Unit Name: Bibb Kinston Association	NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year	
	ed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problemal	ic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing s	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	
Hydric Soil Present? Yes X No	Is the Sampled Area
Wetland Hydrology Present? Yes X No	
Remarks:	-
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)  X Surface Water (A1)  X Aquatic Fauna (B	Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)
X High Water Table (A2) Mart Deposits (B	DITERROR
X Saturation (A3) Hydrogen Sulfide X Water Marks (B1) Oxidized Rhizosp	Odor (C1) X Moss Trim Lines (B16) heres on Living Roots (C3) Dry-Season Water Table (C2)
Sediment Deposits (B2) Presence of Red	uced Iron (C4) Crayfish Burrows (C8)
Algal Mat or Crust (B4) Thin Muck Surface	æ (C7) Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Inundation Visible on Aerial Imagery (B7)	Remarks) Shallow Aquiterd (D3)
X Water-Stained Leaves (89)	X FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes X No Depth (inches): 2 in	ches
Water Table Present? Yes X No Depth (inches): sur	face
Saturation Present? Yes X No Depth (inches): sur	Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:
D. mades	
Remarks:	

Semplina	Point	CP3-A

				Dominance Test worksheet:	
Tree Stratum (Plot size: )	Absolute	Dominant		Number of Dominant Species	
Nyssa biffora (Tupelo,swamp)	30	Y	OBL	That Are OBL, FACW, or FAC:14 (A)	
Magnolia virginiana (Magnolia,sweetbay)	15	Y	_FACW_		
Chamaecyparis thyoides (Cedar,atlantic white)	10		OBL	Total Number of Dominant	
4. Pinus elliottii (Pine,slash)	5		FACW	Species Across All Strata:14 (B)	
5					
6				Percent of Dominant Species	
	60	= Total Co	ver	That Are OBL, FACW, or FAC:100 (A/B)	
50 % of total cover: 30	20 % 0	of total cover	r. 12	Prevalence Index worksheet:	
	-			Total % Cover of: Multiply by:	
Sapling Stratum (Plot size: )					
Cyrilla racemiflora (Cyrilla,swamp)	10	Υ	FACW		
Magnolia virginlana (Magnolia,sweetbay)	10		FACW	FACW species X 2 =	
Nyssa biflora (Tupelo,swamp)	10	<u> </u>		FAC species X 3 =	
	10	<u>_</u> _	OBL	FACU species X 4 =	
4					
5					
6				Column Totals: (A) (B)	
	30	= Total Co	ver		
50 % of total cover: 15	20 % 0	of total cover	r: <u>0</u>	Prevalence Index = 8/A =	
Shrub Stratum (Plot size:)				Hydrophytic Vegetation Indicators:	
Cyrilla racemiflora (Cyrilla,swamp)	10	Y	FACW	1 - Rapid Test for Hydrophytic Vegetation	
2. Lyonia lucida (Fetter-bush)	5	Y	FACW	X 2 - Dominance Test Is > 50%	
Magnolia virginiana (Magnolia,sweetbay)		- <u>·</u>	FACW	3 - Prevalence Test is ≤ 3,01	
4.			TACVV	Problematic Hydrophytic Vegetation' (Explain)	
5.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must	
6				be present, unless disturbed or problematic.	
	20	= Total Co	ver	Definitions of Vegetation Strata:	
50 % of total cover: 10	_ 20 % d	of total cover	г4		
				Tree - Woody plants, excluding woody vines,	
Herb Stratum (Plot size:)				approximately 20 ft (6 m) or more in height and 3 in.	
1. Sphagnum spp.	30	Υ	OBL	(7.6 cm) or larger in diameter at breast height (DBH).	
2. Carex glaucescens (Sedge,southern waxy)	10	Y	OBL	Sanitar Weady slasts such discuss to since	
3. Chasmanthium omithorhynchum (Spikegrass,bird-bill)	10	Y	FACW	Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less	
Dichanthelium scabriusculum (Grass, woolly panic)	10	<u>·</u>	OBL	than 3 in. (7.6 cm) DBH.	
Dulichium arundinaceum (Sedge,three-way)	5		OBL		
	5			Shrub - Woody plants, excluding woody vines,	
6. Eriocaulon decangulare (Pipewort,ten-angle)			OBL	approximately 3 to 20 ft (1 to 6 m) in height.	
7. Hypericum galioides (St. john's-wort,bedstraw)	5		OBL	Black All Sadanas (community)	
8				Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody	
9				plants, except woody vines, less than approximately	
10				3 ft (1 m) in height.	
11					
	75	= Total Co	ver	Woody vine ~ All woody vines, regardless of height.	
50 % of total cover: 37.5		of total cover			
Woody Vine Stratum (Plot size: )					
Smilax laurifolia (Greenbrier,laurel-leaf)	2	Υ	FACW		
Smilax valteri (Greenbrier,coral)		<u>'</u>	OBL		
			OBL		
3				Hydrophytic	
4				Vegetation	
5				Present? Yes X No	
	4	= Total Co	ver		
50 % of total cover: 2	20 % 0	of total cover			
20 % 5. (Otal COTal)		. total buyet			
Remarks: (Include photo numbers here or on a separate	sheet.)	· · · · · · · · · · · · · · · · · · ·			

Sampling Point: CP3-A

Profile Desc Depth	cription: (Describe to the d	epth needed to docum	nent the le	ndicator o	r confirm	the absence of	indicators.)	
(inches)	Color (moist) %	Color (moist)	%	Type	Loc²	Texture	Remarks	S
0-3				N/A	N/A	Muck	Mucky Mineral	
3-7	10YR4/1	10YR5/4	4	С	N/A	Sandy		
7-12	10YR3/1	10YR5/4	4	С	N/A	Sandy		
							· · · · · · · · · · · · · · · · · · ·	
							<u> </u>	
¹Type: C=C	oncentration, D=Depletion, F	M=Reduced Matrix, C	S=Covered	d or Coate	d Sand Gr	ains. <sup>2</sup> Loc	cation: PL=Pore Lining	g, M=Matrix.
Black His Hydroger Stratified X Organic I X 5 cm Muc Muck Pre 1 cm Muc Depleted Thick Da Coast Pr	(A1) Ipedon (A2) stic (A3) n Sulfide (A4) Layers (A5) Bodles (A6) (LRR P, T, U) cky Mineral (A7) (LRR P, T, esence (A8) (LRR U) ck (A9) (LRR P, T) I Below Dark Surface (A11) rk Surface (A12) airie Redox (A16) (MLRA 15 ucky Mineral (S1) (LRR O, S	Redox Depre Mart (F10) (L Depleted Oct Iron Mangane OA) Umbric Surfa Delta Ochric	face (S9) of Matrix (I and Matrix (F3) Surface (F4 Surface ssions (F6 RR U) Oric (F11) (See (F13) (I (F17) (ML)	(LRR S, T, F1) (LRR 0 F2) 6) (F7) 3) (MLRA 15 es (F12) (L LRR P, T, RA 151)	, U) D) 1) RR O, P, 1 U)	1 cm Mu 2 cm Mu Reduced Piedmon Anormald (MLR Red Par Very Sh Other (E	rs for Problematic Hy uck (A9) (LRR O) uck (A10) (LRR S) d Vertic (F18) (outside nt Floodplain Soils (F1 ous Bright Loarny Soils (A 153B) rent Material (TF2) allow Dark Surface (Tr explain in Remarks) ors of Hydrophytic vege hydrology must be pred d or problematic.	e MLRA 150A,B)  9) (LRR P, S, T)  s (F20)  F12)
_	leyed Matrix (S4) edox (S5)	Reduced Ver	tic (F18) (I odplain Sc	MLRA 160 olls (F19) (	MLRA 149	IA)		
	Metrix (S6) face (S7) (LRR P, S, T, U)	Anomalous B	Iright Loan	ny Soils (F	20) (MLRA	149A, 153C, 1	53D)	
	Layer (if observed):				··			
Type:		<del></del>		Hyd	ric Soll Pr	esent?	Yes X	No
Depth (in	iches):						<del></del>	·
Remarks:								

### WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

City/County: Santa Rosa Sampling Date: Oct 5, 2011
State: Florida Sampling Point: CP3-B
Section, Township, Range:
cal relief (concave, convex, none): none Slope (%):
5" N Long: 86°58'56" W Datum: NAD 83
NWI Classification:
Yes X No (If no, explain in Remarks.)
? Are "Normal Circumstances" present? Yes X No
? (If needed, explain any answers in Remarks.)
npling point locations, transects, important features, etc.
Is the Sampled Area
within a Wetland? Yes No
Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Office (C1) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Signification Visible on Aerial Imagery (C9) (C7) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)
Wetland Hydrology Present? Yes No X
evious inspections), if available:
, ,

amplina	Daint	CP3-B	
ambiina	POINT	UF3-B	

	Abaalata	D1		Dominance Test Worksheet:
Tree Stratum (Plot size: )	Absolute	Dominant	Indicator	
	% Cover	Species?	Status	Number of Dominant Species
Quercus virginiana (Oak,live)	10	Y	FACU	That Are OBL, FACW, or FAC: 3 (A)
Quercus hemispherica (Oak,laurel)	10	Y	_ UPL	
3. Quercus nigra (Oak,water)	2		FAC	Total Number of Dominant
4.				Species Across All Strata: 9 (B)
			<del></del>	(5)
				Percent of Dominant Species
6				That Am One seasons are
	22	= Total Co	ver	That Are OBL, FACW, or FAC: 33.3 (A/B)
50 % of total cover: 11	20 % c	of total cover	: 4.4	Prevalence Index worksheet:
	_			Total % Cover of: Multiply by:
Sapling Stratum (Plot size: )				
Quercus virginlana (Oak,live)	40	v	EAGU	OBL species <u>3</u> x1 = <u>3</u>
	10	<u> </u>	<u>FACU</u>	FACW species 10 X 2 = 20
Quercus hemispherica (Oak,laurel)	10	Y	UPL	FAC species 50 X 3 = 150
Quercus nigra (Oak,water)	2		FAC	
4				FACU species <u>80</u> X 4 = <u>320</u>
5.				UPL species 0 X 5 = 0
6.				Column Totals: 143 (A) 493 (B)
	22	= Total Co	ver	
50 % of total cover:11	_ 20 % c	of total cover	: 4.4	Prevalence Index = B/A = 3.45
	_			
Shrub Stratum (Plot size:				Hydrophytic Vegetation Indicators:
1. Ilex vomitoria (Yaupon)	15	Υ	FAC	1 - Repid Test for Hydrophytic Vegetation
				2 - Dominance Test is > 50%
Quercus hemispherica (Oak,laurel)	15	Y	UPL	3 - Prevalence Test is ≤ 3.01
Vaccinium elliottii (Blueberry,elliott)	15	Y	FAC	<del></del>
4. Ilex glabra (Ink-berry)	10		FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Vaccinium arboreum (Farkleberry)			FACU	
6. Cliftonia monophylla (Buckwheat-tree)	3		OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
o. Oiitottia titotiophylia (buokwiteat-tiee)				be present, unless disturbed or problematic.
	68	= Total Co		Definitions of Vegetation Strata:
50 % of total cover34	_ 20 % d	of total cover	13.6	
				Tree - Woody plants, excluding woody vines,
Herb Stratum (Plot size: )				approximately 20 ft (6 m) or more in height and 3 in.
1. Aristida stricta (Grass,pineland three-awn)	15	~	FAC	(7.6 cm) or larger in diameter at breast height (DBH).
		Y		, , , , , , , , , , , , , , , , , , ,
Pteridium aquilinum (Fem,bracken)	15	Y	_ FACU_	Sapling – Woody plants, excluding woody vines,
Andropogon virginicus (Broom-sedge)	1		FAC	approximately 20 ft (6 m) or more in height and less
4.				than 3 in. (7.6 cm) DBH.
<u> </u>				1
				Shrub - Woody plants, excluding woody vines,
6.				approximately 3 to 20 ft (1 to 6 m) in height.
7				
8	_			Herb - All herbaceous (non-woody) plants, including
9.				herbaceous vines, regardless of size. Includes woody
				plants, except woody vines, less than approximately
10		<del></del>		3 ft (1 m) in height.
11				Marana de la compania del compania del compania de la compania del compania del compania de la compania de la compania del
	31	= Total Co		Woody vine - All woody vines, regardless of height.
50 % of total cover: 15.5	20 % (	of total cover	6.2	
Woody Vine Stratum (Plot size:)				
·				
<u>1</u>				
2.				
3				Hydrophytic
				Vegetation
5				Present? Yes No X_
	0	≃ Total Co	ver	
50 % of total cover: 0	20 %	of total cover	: 0	
00 70 of total 00 tots	20 /8 (	or total cover		•
Remarks: (Include photo numbers here or on a separate	sheet )		-	
remaine, (menero priore manipora noto of on a soparate	5,1000.7			

Sampling Point: CP3-B

Profile Des	cription: (Describe		needed to docu	ment the Ir	ndicator o	r confirm	the absence	e of indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc²	Texture	Don	narks	
0-6	10YR3/1	100						1/611	IBINS	
					N/A	N/A	Sandy			
6-10	10YR4/3	100			N/A	N/A	Sandy_			
10-12+	10YR6/3	100			N/A	N/A	Sandy_	·		
¹Type: C=C	oncentration, D=De	apletion, RM=F	Reduced Matrix, C	S=Covered	d or Coate	d Sand Gr	ains.	<sup>2</sup> Location: PL≂Pore L	ining, M=Ma	ıtrix.
Hydric Soll	Indicators:		-				Indi	cators for Problemati	c Hydric Sc	olls³;
Histosol	(A1)		Polyvalue Be	elow Surfac	æ (\$8) (Ll	RR S, T, U	) <u> </u>	m Muck (A9) (LRR O)		
Histic Ep	lpedoп (A2)		Thin Dark St	ufaçe (\$9) (	LRRS, T	, U)	2 cr	m Muck (A10) (LRR S)		
Black His	stic (A3)		Loamy Gley	ed Matrix (F	F1) (LRR (	O)	Red	luced Vertic (F18) (our	bside MLRA	150A,B)
Hydroge	n Sulfide (A4)		Loamy Gley					dmont Floodplain Soils		
	Layers (A5)		Depleted Ma		*		_	malous Bright Loamy		,
	Bodies (A6) (LRR I	P, T, U)	Redox Dark		6)			MLRA 153B)	(,)	
_	cky Mineral (A7) (L		Depleted Da	-				l Parent Material (TF2)	1	
<u> </u>	esence (A8) (LRR		Redox Depri		• •			y Shallow Dark Surfac		
	ck (A9) (LRR P, T)	=	Mari (F10) (I	•	,		_	er (Explain in Remarks		
_	Below Dark Surfa		Depleted Oc	-	MIDA 15	4)	0	or (Explain in Nemark:	"	
	rk Surface (A12)	ω (A11)	Iron Mangar		-	-	۳۱			
	airie Redox (A16) (	(MI PA 150A)	Umbric Surf				inc	licators of Hydrophytic	vegetation a	and
	• •		_			U)		land hydrology must b	e present, u	nless
_	ucky Mineral (S1)	(LRR 0, 5)	Delta Ochrid			14 4 CODY	dist	urbed or problematic.		
	leyed Matrix (S4)		Reduced Ve			-				
	edox (S5)		Piedmont FI				-			
	Matrix (S6) face (S7) (LRR P,	S, T, U)	Anomalous	Bright Loan	ny Soils (F	·20) (MLR/	A 149A, 153	C, 163D)		
Restrictive	Layer (if observed	i):								
Туре:	, (	,			. I love					
Depth (ir	ichos).		_		Нус	iric Soll Pr	resent?	Yes	No _	<u> </u>
Debtii (ii	iuies).		_							
Remarks:										

SR 87 CONNECTOR	Wetland Evaluation Report
Appendix B	
Soil Photographs and Description	



#### <u>APPENDIX B – SOIL PHOTOGRAPHS AND DESCRIPTIONS</u>

#### I. UPLAND SOIL TYPES

#### A. 1 - Albany Loamy Sand; 0-5% Slopes



0-3" A 10YR 3/2 Sand 3"-8" E1 10YR 3/1 Loamy Sand 8"-12"+ E2 10YR 4/4 Loamy Sand

#### B. 5 - Bonifay Loamy Sand; 0-5% Slopes



0-12"+ A 10YR 5/4 Loamy Sand



#### C. 9 - Dothan Fine Sandy Loam; 2-5% Slopes



0-1" A 10YR 5/2 Sandy Loam 1"-6" E1 10YR 4/3 Sandy Loam 6"-12"+ E2 10YR 5/6 Sandy Loam

#### D. 14 - Fuquay Loamy Sand; 0-5% Slopes



0-0.25" Oi 10YR 2.5/1 Pine Duff 0.25"-6" A 10YR 3/3 Loamy Sand 6"-12"+ E 10YR 4/4 Loamy Sand



### E. 19 - Kalmia Loamy Fine Sand; 2-5% Slopes



THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN TRANSPORT NAMED IN THE PERSON NAMED IN TRANSPORT NAMED IN THE PERSON NAMED IN		
0-1"	Oi	10R 2.5/1 Pine Duff
1"-4"	AE1	10YR 7/1 Loamy Fine Sand w/
		10YR 6/2 Loamy Fine Sand
4"-8"	AE2	10YR 5/4 Loamy Fine Sand w/
		10YR 6/4 Loamy Fine Sand
8"-12"+	Е	10YR 6/4 Loamy Fine Sand

### F. 21 - Lakeland Sand; 0-5% Slopes



0-0.25"	Oi	10R 2.5/1 Pine Duff
0.25"-1.5"	Α	10YR 6/4 Loamy Sand
1.5"-5"	ΑE	10YR 5/4 Loamy Sand
5"-12"+	E	10YR 5/6 Loamy Sand



#### G. 22 - Lakeland Sand; 5-12% Slopes



0-2" Oi 10YR 5/3 Leaf Litter Layer 2"-12"+ A 10YR 5/3 Sand

### H. 34 - Pactolus Loamy Sand; 0-5% Slopes



0-1" Oi 10R 2.5/1 Pine Duff 1"-5" A 10YR 2/1 Loamy Sand 5"-12"+ E 10YR 4/2 Loamy Sand



#### I. 44 - Troup Loamy Sand; 0-5% Slopes



0-0.5" Oi 10R 2.5/1 Pine Duff 0.5"-4" A 10YR 4/3 Loamy Sand 4"-12"+ E 10YR 5/6 Loamy Sand

#### II. WETLAND SOIL TYPES

#### A. 3- Bibb-Kinston Association



0-1.5" A 5G 5/1 Leaf Litter Layer 1.5"-12"+ C 5G 5/1 Clay



### B. 37 - Rains Fine Sandy Loam



0-1.5" Oi 10R 2.5-1 Pine Duff 1.5"-6" A 10YR 4/1 Sandy Loam 6"-12"+ E 10YR 5/1 Sandy Loam w/ 10YR 5/6 Redox

#### C. 40 - Rutledge Loamy Sand



0-5" A 10YR 3/2 Muck 5"-12"+ E 10YR 5/1 Loamy Sand w/ 10YR 6/5 Redox

SR 87 CONNECTOR	Wetland Evaluation Report
Appendix C	
UMAM Polygon Evaluation Sheets	



#### Alignment 1 UMAM Summary Table

Polygon #	Impact Type	FNAI Wetland ID	FLUCFCS Wetland ID		Landscape	Water En	vironment		Community Structure/Vegetation Asse		Area (ac)	FL Unit(s)
rolygoli#	ппрасс туре	rival Wedalid ID	PLOCECS Wetland ID	Without	With Project	Without	With	Without	With	Score	Area (ac)	PL OIII(S)
1A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	0	10	0	9	0	0.93	2.95	2.75
1	Shading	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	7	10	9	9	7	0.17	15.13	2.52
2	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	9	0	9	0	8	0	0.87	0.04	0.03
3	Shading	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	8	8	8	7	6	0.07	2.02	0.13
4	Shading	Basin Swamp	617-Mixed Wetland Hardwoods	9	8	9	8	9	6	0.17	4.15	0.69
5	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	8	0	0.83	6.35	5.29
6	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	8	0	8	0	7	0	0.77	3.34	2.56
7	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	4.55	3.34
8	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	7	0	0.80	2.34	1.87
9	Shading	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	8	10	8	8	6	0.17	1.08	0.18
9A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	0	10	0	8	0	0.90	2.50	2.25
10	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	6	0	7	0	6	0	0.63	2.75	1.74
11	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	8.14	5.97
12	Permanent-Dredge or Fill	Dome Swamp	630-Mixed Forested Wetland	9	0	9	0	8	0	0.87	1.43	1.24
13	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	6	0	7	0	6	0	0.63	0.25	0.16
14	Indirect	Adjacent to Shading Impact		9	8	10	10	9	8	0.07	60.07	4.00
15	Indirect	Adjacent to Direct Impact		8	6	8	4	7	6	0.23	79.33	18.51 53.25

Acreage To	tals
Direct Impacts	34.64
Shading Impacts	22.38
Indirect Impacts	139.40
Total Wetlands	196.42



#### Alignment 2 UMAM Summary Table

Polygon #	Impact Type	FNAI Wetland ID	ID FLUCFCS Wetland ID		Landscape port	Water Environment		Community Structure/Vegetation		Assessment Score	Area (ac)	FL Unit(s)
				Without	With Project	Without	With	Without	With	Score		
1A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	0	10	0	9	0	0.93	2.95	2.75
1	Shading	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	7	10	9	9	7	0.17	15.13	2.52
2	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	9	0	9	0	8	0	0.87	0.04	0.03
3	Shading	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	8	8	8	7	6	0.07	2.02	0.13
4	Shading	Basin Swamp	617-Mixed Wetland Hardwoods	9	8	9	8	9	6	0.17	4.15	0.69
5	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	8	0	0.83	6.35	5.29
6	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	8	0	8	0	7	0	0.77	3.34	2.56
7	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	4.55	3.34
8	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	7	0	0.80	2.34	1.87
9	Shading	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	8	10	8	8	6	0.17	1.08	0.18
9A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	0	10	0	8	0	0.90	2.50	2.25
10	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	6	0	7	0	6	0	0.63	2.75	1.74
11	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	8.14	5.97
14	Indirect	Adjacent to Shading Impact		9	8	10	10	9	8	0.07	60.07	4.00
15	Indirect	Adjacent to Direct Impact		8	6	8	4	7	6	0.23	73.94 Total FL>	17.25 <b>50.60</b>

Acreage Totals						
Direct Impacts	30.62					
Shading Impacts	22.38					
Indirect Impacts	134.01					
Total Wetlands	187.01					

# PART I – Qualitative Description (See Section 62-345.400, F.A.C.)

Site/Project Name		Application Numbe	er Assessment Area Name or Number			or Number	
SR 87 Connector	PD&E				Poly	gon 1	
FLUCCs code	Further classifica	ition (optional)		Impac	ct or Mitigation Site?	Assessment Area Size	
615	FN/	Al - Bottomland Fo	orest		Impact (Shading)	15.13	
Basin/Watershed Name/Number	Affected Waterbody (Clas	is)	Special Classification	on (i.e.C	DFW, AP, other local/state/federal	designation of importance)	
Blackwater River	III				OFW		
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, upla	nds			
Wetlands are	e the floodplain of the Bla	ackwater River, w	hich flows south a	nd we	st into the Pensacola Ba	ay.	
Assessment area description							
The floodplain of the Blackwater R There is limitied development co currently		homes to the nort	th and institutional	and in	ndustrial development to		
Significant nearby features			Uniqueness (collandscape.)	nsider	ring the relative rarity in	relation to the regional	
State Road 90, Sar	nta Rosa County jail, Milt	ton	The Blackwater River is a unique landscape feature within northern Santa Rosa County and this section is an Outstanding Florida Waterway with potential Gulf sturgeon habitat.				
Functions			Mitigation for pre	vious į	permit/other historic use	<del></del>	
The floodplains are high quality v Pensacola Bay. The river is highly The intact floodpla		over and foraging.	ı. N/A				
Anticipated Wildlife Utilization Base that are representative of the asse be found)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Black bear, deer, armadillo, amp invertebrat	phibians, birds, reptiles, s tes within the river	small mammals,	observed threatened plants species such as sundews, pitcher plants. There is anticipated utilization by black bear and the the river is listed as critical habitat for the Gulf sturgeon.				
Observed Evidence of Wildlife Utili	zation (List species direction	ctly observed, or o	ther signs such a	s track	ks, droppings, casings, r	nests, etc.):	
Additional relevant factors:							
This floodplain area is not propose bridged.	d for direct impact. The	re are only minor	impacts, primarily	from s	shading, proposed since	the area will be	
Assessment conducted by:			Assessment date(s):				
Dan Van Nostrand		10/1/2011, update February 2013					

# PART II – Quantification of Assessment Area (impact or mitigation) (See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name		Application Number		Assessment Area	Name or Number	
SR 87 Connec	ctor PD&E			Polygon 1 -Blackwater River Bottomland Forest		
mpact or Mitigation		Assessment conducted by:		Assessment date	:	
Impact (Sh	ading)	Daniel Van Nostra	Daniel Van Nostrand 10/1/2011, update Feb 2013			
Scoring Guidance	Optimal (10)	Moderate(7)	nimal (4)	Not Present (	0)	
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	*  '			Condition is insuffic provide wetland/su water function	urface
.500(6)(a) Location and Landscape Support  to pres or current with 9 7	runs adjacent to the powerling some erosion and rutting is p	intact on the south side of the ne ROW. The ROW area hav present. There are currently r a bridge will reduce future neg	re been clear no impedime	ed of canopy and nts to wildlife spec	subcanopy vegetation	on an
.500(6)(b)Water Environment (n/a for uplands)  The river appears to have excellent water quality, appropriate water inputs, and every regime. The floodplain wetlands adjacent to the river provide adequate water filtral prevent erosion. The water flow in the river is currently unobstructed. The use of floodplain vegetation intact to continue to stabilize the soil surface. There will also be bridge to collect untreated stormwater and convey it to treatment ponds. The piling significantly impact the flow of the river.					n and stabilize the so oridge will help keep stormwater controls o	oil to the on the
.500(6)(c)Community structure						
Vegetation and/or     Benthic Community	disturbed by tree falls, which been cleared and maintaine	high diversity of canopy and so typically occurs after storm end as a powerline ROW. ERCopment plan will take the threat be minimized to the max	events, and the located sevents located sevents.	ne northern portion eral threatened/er es locations into a	n of the floodplain are ndangered plant spec	ea ha
//o pres or		DO HIMINIZED TO THE HIGH	u.ii GAlGIII	practicable.		
current with						
9 7						
Score = sum of above scores/30 (if	If proper ation as mitiga	ation		For import access	oment erece	
uplands, divide by 20)			<u> </u>	For impact assess	oment aleas	
current	Preservation adjustmer	Preservation adjustment factor = FL = delta x acres = 2.52				
0.93 with 0.77	Adjusted mitigation delt					
<u>'</u>	If mitigation		<u> </u>	or mitigation asse	sement areas	
Delta = [with-current]	Time lag (t-factor) =		' '			

RFG = delta/(t-factor x risk) =

Risk factor =

0.17

# PART I – Qualitative Description (See Section 62-345.400, F.A.C.)

Site/Project Name		Application Numbe	ber Assessment Area Name or Number				
SR 87 Connector	PD&E				Polyg	on 1A	
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area Size	
615	FNA	AI - Bottomland Fo	prest		Impact (Direct)	2.95	
Basin/Watershed Name/Number	Affected Waterbody (Clas	s)	Special Classification	on (i.e.C	DFW, AP, other local/state/federal	designation of importance)	
Blackwater River	III		OFW				
Geographic relationship to and hyd	-		·				
Wetlands are	the floodplain of the Bla	ackwater River, w	hich flows south a	nd wes	st into the Pensacola Ba	ay.	
Assessment area description							
The floodplain of the Blackwater R There is limitied development con currently		homes to the nort	h and institutional	and in	dustrial development to		
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional	
State Road 90, San	ta Rosa County jail, Milt	on	The Blackwater River is a unique landscape feature within northern Santa Rosa County and this section is an Outstanding Florida Waterway with potential Gulf sturgeon habitat.				
Functions			Mitigation for previous permit/other historic use				
The floodplains are high quality w Pensacola Bay. The river is highly The intact floodplai		over and foraging	N/A				
Anticipated Wildlife Utilization Base that are representative of the assesbe found)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Black bear, deer, armadillo, amp invertebrat	hibians, birds, reptiles, ses within the river	small mammals,	observed threatened plants species such as sundews, pitcher plants. There is anticipated utilization by black bear and the the river is listed as critical habitat for the Gufl sturgeon.				
Observed Evidence of Wildlife Utiliz	zation (List species dire	ctly observed, or o	ther signs such a	s track	s, droppings, casings, ı	nests, etc.):	
Additional relevant factors:							
This portion of the floodplain is pro	posed for direct impact t	for the bridge app	roacht.				
Assessment conducted by:			Assessment date	(s):			
Dan Van Nostrand			4/1/2012, update Feb 2013				

## PART II – Quantification of Assessment Area (impact or mitigation) (See Sections 62-345.500 and .600, F.A.C.)

.500(6)(b)Water Environment (n/a for uplands)  The river appears to have excellent water quality, appropriate water inputs, and evidence of a typical flooding regime. The floodplain wetlands adjacent to the river provide adequate water filtration and stabilize the soil to prevent erosion. The water flow in the river is currently unobstructed. This polygon is proposed for direct impact; however, box culverts will be used to maintain pre-construction flow regimes through the floodplain.				(See Section	18 62-345.500 and .600,	r.A.C.)			
Impact of Mitigation    Assessment conducted by: Daniel Van Nostrand   Assessment date: 4/1/2012, update February 2013	Site/Proje		87 Connec	ctor PD&E	Application Number			ackwater River Bottomlan	
Scoring Guidance The scoring of each record of each	Impact or	Mitigation			Assessment conducted by:		Assessment date		
The scoring of each indicator is based on what would be suitable for the water sessesed  Condition is optimal and fully supported water assessed  Condition is optimal and fully supported water assessed  The social of the five control of water assessed  Condition is optimal and fully supported water functions  The social of the five control of water functions  The social of the five control of water functions  The social of the five control of water functions  The social of the five control of water functions  The social of the five control of water functions  The social of the five control of water functions  The social of the five control of water functions  The social of the five control of functions  The social of the five control of water functions  The social of the five control of functions  The social of the five control of functions  The social of the five control of the five control of functions  The river appears to have excellent water quality, appropriate water inputs, and evidence of a typical flooding regime. The floodplain water for inputs of the five control of functions of the foodplain.  The river appears to have excellent water quality, appropriate water inputs, and evidence of a typical flooding regime. The floodplain water for inputs of the five control of functions of the foodplain.  The floodplain water functions  The river appears to have excellent water quality, appropriate water inputs, and evidence of a typical flooding regime. The floodplain water functions water floor in the river provide adequate water filtration and stabilize the soil to prevent ensist. The value floor in the filter functions water floor in the filter functions.  The floodplain area has a high diversity of canopy and subcanopy species. Portions of the polygon have been disturbed by tree falls, which typically occurs aft			Impact (D	Direct)	Daniel Van Nostra	Daniel Van Nostrand 4/1/2012, update February 20			
indicator is based on what lyou do suitable for the type of wetland or surface water type of wetland or surface water supports wetlandsurface water functions  ### Adjusted in the support functions  ### Adjusted in				Optimal (10)	· · · · · · · · · · · · · · · · · · ·				
Landscape Support  In limiting at area is relatively intact on the south is doe of the river, nowever, the area on the northern store or the fiver ins adjacent to the powerline ROW. The ROW area have been cleared of canopy and subcanopy vegetation and directly impacted, but a box culvert will be used to facilitie wildlife invovement of amphibians, reptiles, and small mammals through the floodplain.  The river appears to have excellent water quality, appropriate water inputs, and evidence of a typical flooding regime. The floodplain wetlands adjacent to the river provide adequate water filtration and stabilize the soil to prevent erosion. The water flow in the river is currently unobstructed. This polygon is proposed for direct impact, however, box culverts will be used to maintain pre-construction flow regimes through the floodplain.  The floodplain area has a high diversity of canopy and subcanopy species. Portions of the polygon have been disturbed by tree falls, which typically occurs after storm events, and the northern portion of the floodplain area has been cleared and maintainer ROW. ERC located several threatened/endangered plant species in the groundcover. The development plan will take the threatened species locations into account and any impacts we be minimized to the maximum extent practicable.  Score = sum of above scores/30 (if uplands, divide by 20) current with 0.93 0.00  If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =   If mitigation For mitigation assessment areas  FL = delta x acres = 2.75	indicator is based on what would be suitable for the type of wetland or surface  Condition is supports water water			supports wetland/surface	optimal, but sufficient to maintain most wetland/surface water	wetland	l/surface water	provide wetland/surface	
The river appears to have excellent water quality, appropriate water inputs, and evidence of a typical flooding regime. The floodplain wetlands adjacent to the river provide adequate water filtration and stabilize the soil to prevent erosion. The water flow in the river is currently unchanged. This polygon is proposed for direct impact; however, box culverts will be used to maintain pre-construction flow regimes through the floodplain.  The floodplain area has a high diversity of canopy and subcanopy species. Portions of the polygon have been disturbed by tree falls, which typically occurs after storm events, and the northern portion of the floodplain area has been cleared and maintained as a powerline ROW. ERC located several threatenedendengered plant species in the groundcover. The development plan will take the threatened species locations into account and any impacts we be minimized to the maximum extent practicable.  Score = sum of above scores/30 (if uplands, divide by 20) current with opers with one of the polygon have been disturbed by tree falls, which typically occurs after storm events, and the northern portion of the floodplain area has been cleared and maintained as a powerline ROW. ERC located several threatened/endangered plant species in the groundcover. The development plan will take the threatened species locations into account and any impacts we be minimized to the maximum extent practicable.  Score = sum of above scores/30 (if uplands, divide by 20) current with operation and prevent and the maximum extent practicable.  For impact assessment areas  FL = delta x acres = 2.75  FL = delta x acres = 2.75	Landscape Support  the impact area is relatively intact on the south side of tr runs adjacent to the powerline ROW. The ROW area ha some erosion and rutting is present. There are currentl directly impacted, but a box culvert will be used to fac mammals throughout the impact area is relatively intact on the south side of tr runs adjacent to the powerline ROW. The ROW area ha some erosion and rutting is present. There are currently directly impacted, but a box culvert will be used to fact mammals throughout the impact area is relatively intact on the south side of tr runs adjacent to the powerline ROW. The ROW area ha some erosion and rutting is present. There are currently directly impacted, but a box culvert will be used to fact mammals throughout the impact area is relatively intact on the south side of tr runs adjacent to the powerline ROW.						red of canopy and ents to wildlife spe ovement of amphi	subcanopy vegetation arecies. This polygon will be	
The floodplain area has a high diversity of canopy and subcanopy species. Portions of the polygon have been disturbed by tree falls, which typically occurs after storm events, and the northern portion of the floodplain area has been cleared and maintained as a powerline ROW. ERC located several threatened/endangered plant species in the groundcover. The development plan will take the threatened species locations into account and any impacts we be minimized to the maximum extent practicable.  Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.93	The river appears to have excellent water quality, appropriate water inputs, and evidence of a typic regime. The floodplain wetlands adjacent to the river provide adequate water filtration and stabilize prevent erosion. The water flow in the river is currently unobstructed. This polygon is proposed for a however, box culverts will be used to maintain pre-construction flow regimes through the flood current with					n and stabilize the soil to proposed for direct impact			
uplands, divide by 20) current pr w/o pres	1. 2. E w/o pres c current	The floodplain area has a high diversity of canopy and subcanopy species. Portions of the polygon had isturbed by tree falls, which typically occurs after storm events, and the northern portion of the floodplain been cleared and maintained as a powerline ROW. ERC located several threatened/endangered plant the groundcover. The development plan will take the threatened species locations into account and any be minimized to the maximum extent practicable.						n of the floodplain area handangered plant species i	
uplands, divide by 20) current pr w/o pres				-					
Current with 0.93	, , , , , , , , , , , , , , , , , , , ,					sment areas			
For mitigation assessment areas	current or w/o pre		with	l	FL = delta x acres = 2.75				
TODAY - WANTED TO THE TOTAL OF	D-	ulta = [with our	ent]	1		F	or mitigation asse	ssment areas	

RFG = delta/(t-factor x risk) =

Risk factor =

0.93

# PART I – Qualitative Description (See Section 62-345.400, F.A.C.)

Site/Project Name		Application Numbe	ber Assessment Area Name or Number				
SR 87 Connector	PD&E				Poly	gon 2	
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area Size	
617	F	NAI - Basin Swar	np		Impact (Direct)	0.04	
Basin/Watershed Name/Number	Affected Waterbody (Clas	s)	Special Classification	on (i.e.C	FW, AP, other local/state/federal	designation of importance)	
Blackwater River	III				N/A		
Geographic relationship to and hyd	urface water, upla	nds					
This is hydrologically connected	to the adjacent polygon	proposed for sha overland she		Γhese	wetlands connect to the	e Blackwater River via	
Assessment area description							
This basin wetland is fire suppress			subcanopy specie ularly maintained t			oody species that would	
Significant nearby features		Uniqueness (collandscape.)	nsider	ing the relative rarity in	relation to the regional		
Blackwat	er Heritage Trail		None				
Functions			Mitigation for prev	vious p	permit/other historic use	)	
This wetlands provides water filtra fo	tion, water retention, for r wildlife.	aging and habitat	t N/A				
Anticipated Wildlife Utilization Base that are representative of the asset be found)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Black bear, deer, armadillo, amp invertebrat	hibians, birds, reptiles, s es within the river	small mammals,	observed threatened plans species such as sundews, pitcher plants. There is anticipated utilization by black bear and the river is listed as critical habitat for the Gulf sturgeon.				
Observed Evidence of Wildlife Utili	zation (List species direc	ctly observed, or o	other signs such a	s track	s, droppings, casings,	nests, etc.):	
Additional relevant factors:							
none							
Assessment conducted by:			Assessment date	(s):			
Dan Van Nostrand		Oct-11					

## PART II – Quantification of Assessment Area (impact or mitigation) (See Sections 62-345.500 and .600, F.A.C.)

Application Number	Application Number Assessment Area Name or Number				
	Polygon 2 - Basin Swamp				
Assessment conducted by:	Assessment conducted by: Assessment date:				
Impact (Direct) Daniel Van Nostrand Oct-11					
Moderate(7)	Minimal (4) Not Present (0)				
	Assessment conducted by:  Daniel Van Nostrand				

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions
.500(6)(a) Location and Landscape Support  w/o pres or current with 9 0			ed wildlife access and still prov I condition. The fire suppresso of this wetland system.	
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current with	wetland lacks community zo	nation because the fire regin	nd appears to support the appr ne is not adequate to maintain e of siltation in this wetland froi	the subcanopy and shrub
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community	The canopy of this wetland	is appropriate; however the suppressed shrub	groundcover should be diversond sub-canopy.	e but is not due to the fire
w/o pres or current with  8 0  Score = sum of above scores/30 (if uplands, divide by 20)	If preservation as mitiga Preservation adjustmen		For impact asses	sment areas

For impact assessment areas

FL = delta x acres = 0.03

Delta = [with-current] 0.87 If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas

RFG = delta/(t-factor x risk) =

Site/Project Name Application Nu			ber Assessment Area Name or Number				
SR 87 Connector	PD&E				Poly	gon 3	
FLUCCs code	Further classifica	tion (optional)		Impact or	Mitigation Site?	Assessment Area Size	
643	Seep	age Slope / Wet F	Prairie	In	npact (Direct)	2.02	
Basin/Watershed Name/Number Blackwater River	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.OFW,	, AP, other local/state/federal	designation of importance)	
Blackwaler River	III				N/A		
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, upla	ands			
This seepage slope/wet prairie (s			wetland. The genually the Pensacol		er flow is to the sout	h and west towards the	
Assessment area description							
The ss/wp is fire suppressed and h			s. There are portion herbaceous grou		wetland with a more	e open canopy that have	
Significant nearby features			Uniqueness (co landscape.)	nsidering	the relative rarity in	relation to the regional	
Blackwater Heritage Trail, Frosted Flatwoods Salamander Critical Habita Unit RFS2 Subunit A			None				
Functions			Mitigation for pre	vious per	mit/other historic use	е	
This wetlands provides water filtration	tion, water retention, for r wildlife.	aging and habitat			N/A		
Anticipated Wildlife Utilization Base that are representative of the asset be found)				T, SSC),	isted Species (List stype of use, and inte		
Black bear, deer, armadillo, amp invertebrate	hibians, birds, reptiles, ses within the river	small mammals,	There is anticipa critical habitat	ated utilization for the G	ation by black bear a fulf sturgeon. Furthe	undews, pitcher plants. and the river is listed as er, there is an historic in the vicinity of this	
Observed Evidence of Wildlife Utili:	zation (List species dire	ctly observed, or	other signs such a	as tracks,	droppings, casings,	nests, etc.):	
Additional relevant factors:							
Located within Flatwoods Salaman	der critical habitat unit.						
Assessment conducted by:			Assessment date	e(s):			
Dan Van Nostrand			Oct-11				

Site/Project Name		I	1:	
		Application Number		Area Name or Number
	nnector PD&E			Polygon 3 - SS/WP
mpact or Mitigation		Assessment conducted by:	Assessment of	
Impac	(Shading)	Daniel Van Nostra	nd	Oct-11
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each ndicator is based on what would be suitable for the ype of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions  Minimal level of support of wetland/surface water functions		
.500(6)(a) Location and Landscape Support  /o pres or urrent wi	There is little developm fragmented and still provid Clear Creek and Black	rs deeper basin swamp wetlar lent surrounding this polygon s des water filtration and retentic water River. This wetland poly alignments and is propos	o access to wildlife is not line benefits to downstream or agon is within the proposed	imited. This wetland is not receiving waterways. such as
.500(6)(b)Water Environme (n/a for uplands)  fo pres or current wi 8	wetland lacks community a strata woody species as There are hydric soils prese used to traverse this wetlan	riate hydrophytic vegetation an zonation because the fire regir coppice. There is no evidence ent. This area is proposed for d area which will prevent dam the wetlands outside	ne is not adequate to main of siltation in this wetland direct impact by Corridor 1 ming and subsequent pond	tain the subcanopy and shrub from surrounding land uses or Corridor 2. a bridge will b
.500(6)(c)Community struct  1. Vegetation and/or 2. Benthic Community  /o pres or current wi	The canopy in this wetland wet prairie; however, the Typically, fires would manara diverse pyrogenic herbactree falls and powerline endangered plant species Bridging the wetland wh	I has approximately 100 trees ore is substantial groundcover of ge these wetlands creating an eeous groundcover. Approxima ROWs. These opened areas es. This polygon is proposed f ill shade the corridor area, but groundcover once the s	regetation including wiregropen canopy and sub-canately 20% of this wetland shad the greatest diversity for a shading impact by eithallow for light penetration	ass throughout the polygon. opy and encouraging growth ystem has been opened up b and contained threatened / ner Corridor 1 or Corridor 2.
7				
7 6			1	
Score = sum of above scores/3( uplands, divide by 20)	If preservation as mitig	•	·	sessment areas
Score = sum of above scores/3	Preservation adjustme  Adjusted mitigation de	ent factor =	For impact ass	
Score = sum of above scores/3 uplands, divide by 20) current r w/o pres wi	Preservation adjustme  Adjusted mitigation de	ent factor =	FL = delta x acres =	: 0.13
Score = sum of above scores/3 uplands, divide by 20) current r w/o pres wi	Preservation adjustme Adjusted mitigation de	ent factor =	FL = delta x acres =	

Site/Project Name Application Nu			per Assessment Area Name or Number				
SR 87 Connector	PD&E				Poly	gon 4	
FLUCCs code	Further classifica	tion (optional)		Impact	or Mitigation Site?	Assessment Area Size	
617		Basin Swamp			Impact (Direct)	4.15	
Basin/Watershed Name/Number	Affected Waterbody (Clas	es)	Special Classificati	ion (i.e.OF	W, AP, other local/state/federa	I designation of importance)	
Blackwater River	III				N/A		
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, upla	ands			
This is an interior, deeper wetland			ge slope / wet prai overland sheetflo		e wetlands convey wa	ter to the south towards	
Assessment area description							
This basin wetland is fire suppre	essed with an appropria would typically be					of woody species that	
Significant nearby features			Uniqueness (co landscape.)	nsiderir	ng the relative rarity in	relation to the regional	
Blackwater Heritage Trail, Frosted Flatwoods Salamander Critical Habita Unit RFS2 Subunit A			None				
Functions			Mitigation for pre	vious p	ermit/other historic us	e	
This wetlands provides water filtration	tion, water retention, for r wildlife.	raging and habitat			N/A		
Anticipated Wildlife Utilization Base that are representative of the asset be found)				T, SSC	Listed Species (List s), type of use, and into		
Black bear, deer, armadillo, amp invertebrate	hibians, birds, reptiles, s es within the river	small mammals,	There is anticipa critical habitat	ated utili for the			
Observed Evidence of Wildlife Utilize	zation (List species dire	ectly observed, or	other signs such a	as track	s, droppings, casings,	nests, etc.):	
Additional relevant factors:							
none							
Assessment conducted by:			Assessment date	e(s):			
Dan Van Nostrand			Oct-11				

Oita /Duningt Name		A 1   4     A	LA	Λ 4 · Λ ·	Name - Nombre	
Site/Project Name		Application Number		Assessment Area	Name or Number	
SR 87 Connec	ctor PD&E			Polygon	n 4 - Basin Swamp	
Impact or Mitigation		Assessment conducted by:	A	Assessment date	:	
Impact (Sh	ading)	Daniel Van Nostran	nd		Oct-11	
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present	t (0)
The scoring of each	Optimal (10)	Condition is less than			110011000111 (0)	
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Condition is insu			
would be suitable for the	supports wetland/surface water functions					
type of wetland or surface water assessed	water functions	wetland/surface water functions water fur functions				
			Į.			
.500(6)(a) Location and Landscape Support  w/o pres or current with	There is no limit to wildlife util There are no impediments	red by adjacent seepage slope ization and the wetland provid downstream of this polygon ar proposed for a shading by eit maintained by usi	es optimal fur nd water flows her Corridor 1	nction to downstros via overland she l or Corridor 2. F	eam aquatic environments	onments. kwater
	1					
9 8						
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current with 9	wetland lacks community zo strata woody species as c There are hydric soils pres	ate hydrophytic vegetation and conation because the fire regim oppice. There is no evidence ent. This area is proposed for y corridors 1 and 2, which will wetla	e is not adeque of siltation in direct impact help to mainta	uate to maintain t this wetland from by Corridor 1 or	the subcanopy and surrounding land Corridor 2. This w	d shrub uses. vetland
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current with 9	comprised primarily of m beakrush, yellow-eyed gras	is appropriate with a mix of cy hyrtle-leaf holly and large titi. T is, hatpins, and pitcher plants ( ppy may be impacted by the br	The groundcov (including part	ver is extremely or rot pitcher plants	diverse with wiregr and white-topped	ass, pitcher
	-					
Score = sum of above scores/30 (if	If preservation as mitiga	ation		For impact cases	emont cross	l
uplands, divide by 20)	ii preservation as mitiga	AUOII,	<u> </u>	or impact assess	sment areas	
current	Preservation adjustmer	t factor =		-14		
pr w/o pres with	Adjusted mitigation delt	a =	FL = de	elta x acres = 0.6	) I	
0.90 0.73						i
	1					
	If mitigation		Fo	r mitigation asses	ssment areas	
Delta = [with-current]	Time lag (t-factor) =		· · ·			
0.17	Risk factor =		RFG =	delta/(t-factor x r	risk) =	
0.17	I NON IUOLOI					4

Site/Project Name		Application Numbe	r		Assessment Area Name of	or Number
SR 87 Connector	PD&E				Poly	gon 5
FLUCCs code	Further classificat	tion (optional)		Impac	ct or Mitigation Site?	Assessment Area Size
643	Seep	page Slope / Wet F	<sup>o</sup> rairie		Impact (Direct)	6.35
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ion (i.e.(	OFW, AP, other local/state/federal	designation of importance)
Blackwater River	III				N/A	·
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, upla	ands		
This seepage slope/wet prairie (s			wetland. The gerually the Pensacola			h and west towards the
Assessment area description						
	The ss/wp is fire suppre	essed and has a c	dense canopy of p	ine ar	nd bay trees.	
Significant nearby features			Uniqueness (collandscape.)	nsider	ring the relative rarity in	relation to the regional
Blackwater Heritage Trail, Frosted Flatwoods Salamander Critical Habitat Unit RFS2 Subunit A			None			
Functions			Mitigation for pre	vious	permit/other historic use	9
This wetlands provides water filtrat for	tion, water retention, for r wildlife.	aging and habitat			N/A	
Anticipated Wildlife Utilization Base that are representative of the asses be found)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Black bear, deer, armadillo, ampl invertebrate	hibians, birds, reptiles, s es within the river	small mammals,	observed threatened plans species such as sundews, pitcher plants. There is anticipated utilization by black bear and the river is listed as critical habitat for the Gulf sturgeon. Further, there is an historic Flatwoods salamander with critical habitat in the vicinity of this wetland.			and the river is listed as er, there is an historic
Observed Evidence of Wildlife Utiliz	zation (List species dire	ctly observed, or	other signs such $\epsilon$	as trac	ks, droppings, casings,	nests, etc.):
Additional relevant factors:						
Located within Flatwoods Salaman	der critical habitat unit.					
Assessment conducted by:		,	Assessment date	∍(s):		
Dan Van Nostrand			10/1/2011, update	e Feb	ruary 2013	

SR 87 Conne		Application Number	Assessment A	Assessment Area Name or Number		
	ctor PD&E		P	olygon 5 - SS/WP		
npact or Mitigation		Assessment conducted by:	Assessment d	ate:		
Impact (E	Direct)	Daniel Van Nostrar	nd 10/1/201	1, update February 2013		
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each ndicator is based on what would be suitable for the ype of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	of Condition is insufficient to provide wetland/surface water functions		
.500(6)(a) Location and Landscape Support  fo pres or urrent with 9 0	limitation to wildlife moveme	adjacent to undeveloped land ent to and from this polygon; h is wetland is connected to the	owever, Munson Highway	s located in close proximity t		
.500(6)(b)Water Environment (n/a for uplands)  fo pres or current with 8	wetland lacks community z strata woody species as c There are hydric soils pre- elevated roadways will be p	ate hydrophytic vegetation an onation because the fire regin coppice. There is no evidence sent. This area is proposed fo placed at appropriate sections ent ponding of water, which w	ne is not adequate to maint of siltation in this wetland to or direct impact by Corridor of this or the adjacent bas	ain the subcanopy and shrub from surrounding land uses. 1 or Corridor 2. Culverts or in swamp polygon to prevent		
•						
1. Vegetation and/or 2. Benthic Community  //o pres or current with  0	wet prairie. The dense cand vegetation. Typically, f	as approximately 80-100 trees opy and fire-suppressed shrub fires would manage these wet verse pyrogenic herbaceous g by either Corridon	layer have shaded out the lands creating an open can roundcover. This polygor	typically diverse groundcove opy and sub-canopy and		

RFG = delta/(t-factor x risk) =

Delta = [with-current]

0.83

Time lag (t-factor) =

Risk factor =

Site/Project Name		Application Numbe	r		Assessment Area Name	or Number
SR 87 Connector	PD&E				Poly	gon 6
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area Size
617		Basin Swamp			Impact (Direct)	3.34
Basin/Watershed Name/Number	Affected Waterbody (Clas	s)	Special Classification	on (i.e.C	FW, AP, other local/state/federal	designation of importance)
Blackwater River	III				N/A	
Geographic relationship to and hyc	Irologic connection with	wetlands, other s	urface water, upla	nds		
This is an interior, deeper wetland			e slope / wet prair overland sheetflov		e wetlands convey wat	er to the south towards
Assessment area description						
This basin wetland is fire suppress typically be in coppice if file						
Significant nearby features			Uniqueness (collandscape.)	nsider	ing the relative rarity in	relation to the regional
Blackwater Heritage Trail, Frosted Flatwoods Salamander Critical Habita Unit RFS2 Subunit A, and Munson Highway			None			
Functions			Mitigation for prev	vious p	permit/other historic use	)
This wetlands provides water filtra fo	tion, water retention, for r wildlife.	aging and habitat	t N/A			
Anticipated Wildlife Utilization Base that are representative of the asset be found)				T, SSC	y Listed Species (List s C), type of use, and inte	
Black bear, deer, armadillo, amp invertebrat	hibians, birds, reptiles, s es within the river	small mammals,	There is anticipa critical habitat	ted uti		
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or o	other signs such a	s track	s, droppings, casings, i	nests, etc.):
Additional relevant factors:						
none						
Assessment conducted by:			Assessment date	(s):		
Dan Van Nostrand			10/1/2011, update	e Febr	uary 2013	

Site/Project Name		Application Number	Assessment Are	Assessment Area Name or Number		
SR 87 Connec	ctor PD&E		Polygo	on 6 - Basin Swamp		
mpact or Mitigation		Assessment conducted by:	Assessment da	te:		
Impact (E	Direct)	Daniel Van Nostrai	nd 10/1/2011	, update February 2013		
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each ndicator is based on what would be suitable for the ype of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions					
.500(6)(a) Location and Landscape Support  /o pres or urrent with 0	boundary. There are partial habitat value has been slighthis polygon and water flow	ouffered by adjacent seepage al limitations to wildlife utilizati atly altered by the powerline R is via overland sheet flow to the 1 or Corridor 2. Flow charact roads	on due to the proximity of res OW; however, there are no in the Blackwater River an OFW teristics will be maintained u	sidential development. The mpediments downstream of this area is proposed for		
.500(6)(b)Water Environment (n/a for uplands)  /o pres or current with 0	wetland lacks community zo strata woody species as co There are hydric soils pres elevated roadways will be p damming and subseque	ate hydrophytic vegetation an onation because the fire regin oppice. There is no evidence sent. This area is proposed fo blaced at appropriate sections ent ponding of water, which w tely 1/3 of the this polygon ha	ne is not adequate to maintal of siltation in this wetland from or direct impact by Corridor 1 of this or the adjacent basin ould alter the wetlands outsion	in the subcanopy and shrub om surrounding land uses. or Corridor 2. Culverts or swamp polygon to prevent de of the corridor areas.		
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  /o pres or current with	polygon area is maintain	-disturbed portion of this poly ed as a powerline easement a here is rutting within the powe	and there is no canopy due to	o continual maintenance.		
7 0						
Score = sum of above scores/30 (if	If preservation as mitiga	ation,	For impact asse	ssment areas		
uplands, divide by 20)  current  w/o pres  with	Preservation adjustmer Adjusted mitigation delt		FL = delta x acres = 2	.56		
0.77						
0.77 0	If mitigation		For mitigation ass	accompany company		

RFG = delta/(t-factor x risk) =

Risk factor =

0.77

Site/Project Name Application Nu			per Assessment Area Name or Number				
SR 87 Connector	PD&E				Poly	gon 7	
FLUCCs code	Further classifica	tion (optional)		Impact or Mitigation	Site?	Assessment Area Size	
643	Seep	age Slope / Wet F	Prairie	Impact (Dire	ect)	4.55	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.OFW, AP, other loca	al/state/federal	designation of importance)	
Blackwater River	III			N/A	4		
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, upla	nds			
This polygon is adjacent to reside excavated throug	ential development, Mur h the wetlands. Water						
Assessment area description							
This SS/WP has been affected by the outflow of the water; he							
Significant nearby features			Uniqueness (co landscape.)	nsidering the relativ	e rarity in	relation to the regional	
Blackwater Heritage Trail, Frosted Flatwoods Salamander Critical Habita Unit RFS2 Subunit A, and Munson Highway			None				
Functions			Mitigation for pre	vious permit/other h	nistoric use	9	
This wetlands provides water filtra for	tion, water retention, for wildlife.	aging and habitat		N/A	A		
Anticipated Wildlife Utilization Base that are representative of the asset be found)							
Black bear, deer, armadillo, amp invertebrate	hibians, birds, reptiles, ses within the river	small mammals,	There is anticipa critical habitat	ted utilization by bla for the Gulf sturged	ack bear a on. Furthe cal habitat	undews, pitcher plants. and the river is listed as er, there is an historic in the vicinity of this	
Observed Evidence of Wildlife Utilize	zation (List species dire	ctly observed, or	other signs such a	s tracks, droppings	s, casings,	nests, etc.):	
Additional relevant factors:							
none							
Assessment conducted by:			Assessment date	(s):			
Dan Van Nostrand			10/1/2011, update February 2013				

		г				
Site/Project Name		1			ssessment Area Name or Number	
SR 87 Connec	ctor PD&E			Polygon 7 - Se	eepage Slope/Wet	Prairie
Impact or Mitigation		Assessment conducted by:	Α	Assessment date	:	
Impact (D	irect)	Daniel Van Nostran	nd	10/1/2011,	update February 2	013
Carrier Crister	0 (1 1/40)	BA 1 ( /=>		170	N 15	(0)
Scoring Guidance The scoring of each	Optimal (10)	Moderate(7) Condition is less than	Mini	imal (4)	Not Present	[ (0)
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	el of support of	Condition is insu	fficient to	
would be suitable for the	supports wetland/surface	maintain most		surface water	provide wetland	
type of wetland or surface water assessed	water functions	s wetland/surface water functions water functions				
water assessed		lunctions				
.500(6)(a) Location and Landscape Support w/o pres or	limitation to wildlife moveme	adjacent to undeveloped land t int to and from this polygon; ho is wetland is connected to the	owever, Muns	on Highway is lo	cated in close prox	kimity to
current with						
7 0						
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current  8  0	wetland lacks community zo strata woody species as c	ate hydrophytic vegetation and conation because the fire regim oppice. There is no evidence s present. This area is propos	e is not adequot of siltation in t	uate to maintain t this wetland from	the subcanopy and surrounding land	d shrub uses.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current with 7 0	polygon area is maintained	r-disturbed portion of this polyg as a powerline easement and s proposed for a direct impact	there is no ca	anopy due to con	tinual maintenance	
	-					
Score = sum of above scores/30 (if	If preservation as mitiga	ation	F	or impact assess	sment areas	1
uplands, divide by 20)				or impact assess	J.Hom aloas	
current	Preservation adjustmer	t factor =	FI = 44	elta x acres = 3.3	84	
pr w/o pres with	Adjusted mitigation delt	a =	IL - de	ыа х аывэ – э.э	, <del>-</del>	
0.73 0						l
•	TE and the second		r			
	If mitigation		Fo	r mitigation asses	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
0.73	Risk factor =		RFG =	delta/(t-factor x r	risk) =	

Site/Project Name Application Nu			er Assessment Area Name or Number			or Number
SR 87 Connector	PD&E				Poly	gon 8
FLUCCs code	Further classifica	ition (optional)		Impac	et or Mitigation Site?	Assessment Area Size
643	Seep	page Slope / Wet F	Prairie		Impact (Direct)	2.34
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e.C	DFW, AP, other local/state/federal	designation of importance)
Blackwater River	III				N/A	
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, upla	ands		
This polygon is to the west of Mu		ectly borders the flo he floodplain, and				ions to water flow from
Assessment area description						
This SS/WP is surrounded by undeveloped increased place	d land, but has been partially ant diversity in the groundcov	impacted by mechanic er. The remainder of	cal clearing along the p this polygon is fire sup	owerlin pressed	e ROW. The mechanical clear with a dense pine canopy.	aring has mimicked fire and
Significant nearby features			Uniqueness (collandscape.)	nsider	ring the relative rarity in	relation to the regional
Munson Highway, Clear Creek.			None			
Functions			Mitigation for prev	vious į	permit/other historic use	;
This wetlands provides water filtrat wildlife, a	tion, water retention, for and creek buffer.	aging , habitat for	n/A			
Anticipated Wildlife Utilization Base that are representative of the assesbe found)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Black bear, deer, armadillo, ampi invertebrate	hibians, birds, reptiles, ses within the river	small mammals,	observed threatened plant species such as sundews, pitcher plants.  There is anticipated utilization by black bear			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ectly observed, or	Lother signs such a	as trac	ks, droppings, casings,	nests, etc.):
Additional relevant factors:						
none						
			·-			
Assessment conducted by: Dan Van Nostrand			Assessment date October 2012, up		Fohruary 2013	
Dan van Nostranu			October 2012, up	Juale 1	-ebluary 2013	

Site/Project Name		Application Number	A	Assessment Area	Name or Number	
SR 87 Connec	tor PD&E			Polygon 8 - Se	epage Slope/Wet	Prairie
Impact or Mitigation		Assessment conducted by:	A	Assessment date:	:	
Impact (Di	irect)	Daniel Van Nostran	nd	October 2012	, update February	2013
Scoring Guidance	Ontimal (10)	Moderate/7)	Mini	imal (4)	Not Process	t (0)
Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10)  Condition is optimal and fully supports wetland/surface water functions	Moderate(7)  Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	tion is less than , but sufficient to aintain most d/surface water  d/surface water  d/surface water  d/surface water  d/surface water  d/surface water		Not Present Condition is insu provide wetland water functi	fficient to /surface
.500(6)(a) Location and Landscape Support  w/o pres or current with 9 0	Clear Creek. There is no dir is located in close proxin associated with Clear Cree (OFW) and Pensacola Bay.	cent to undeveloped land to th ect limitation to wildlife movern nity to the eastern boundary. T k and provides direct water inp There are no barriers to the m t for the Clear Creek bridge ap bridg	nent to and fro This wetland b out to the cree ovement of w proaches. Th	om this polygon; hoorders the floodpoked system and ever the rater into the cree	nowever, Munson blain bottomland fo entually Blackwate k system. This wo	Highway orest er River etland is
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current with	wetland lacks community zo strata woody species as c	ate hydrophytic vegetation and onation because the fire regim oppice. There is no evidence s present. This area is propos	e is not adequof siltation in t	uate to maintain t this wetland from	the subcanopy and surrounding land	d shrub uses.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current with  7	polygon area is maintained	n-disturbed portion of this polyg as a powerline easement and area is proposed for a direct im	there is no ca	anopy due to con		
			-			
Score = sum of above scores/30 (if uplands, divide by 20)  current br w/o pres with 0.8 0.00	If preservation as mitigated Preservation adjustment Adjusted mitigation delt	nt factor =		or impact assess		
	If mitigation		<u> </u>	r mitigation	noment area	
Delta = [with-current]	Time lag (t-factor) =			r mitigation asses	ssment areas	
0.80	Risk factor =		RFG =	delta/(t-factor x r	risk) =	

Site/Project Name		Application Number	per Assessment Area Name or Number				
SR 87 Connector	PD&E				Poly	gon 9	
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area Size	
615		Bottomland Fores	st		Impact (Shading)	1.08	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)				
Blackwater River				N/A			
Geographic relationship to and hyc	Irologic connection with	wetlands, other s	urface water, upla	nds			
This polygon includes Clear Cre	ek and the Clear Creek	t floodplain and is further down		connec	cted via surface flow to	the Blackwater River	
Assessment area description							
This floodplain/bottomland forest is mixture of hardwood evergr							
Significant nearby features			Uniqueness (collandscape.)	nsideri	ing the relative rarity in	relation to the regional	
Munson Hig	Blackwater Stream (Clear Creek) bisects the floodplain/bottomland forest.						
Functions			Mitigation for prev	vious p	permit/other historic use	)	
The floodplains are high quality wetlands that collect and convey water to Pensacola Bay. The creek is highly utilized by wildlife for cover and foraging. The intact floodplain helps prevent erosion, regulate water temperature, and maintain in-creek habitats.			N/A				
Anticipated Wildlife Utilization Base					y Listed Species (List s		
that are representative of the asset be found)	ssment area and reason	nably expected to	classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Black bear, deer, armadillo, amp invertebrat	hibians, birds, reptiles, ses within the river	small mammals,	The floodplain/bottomland forest is diverse and contains many state threatened plant species such as sundews, pitcher plants, bluestem, meadow beauty, and yellow-eyed grass. There is anticipated utilization by black bear. Clear Creek is not listed as Critical Habitat for the Gulf sturgeon or the reticulated Flatwoods salamander.				
Observed Evidence of Wildlife Utili.	zation (List species dire	ctly observed, or	other signs such a	s track	s, droppings, casings, ı	nests, etc.):	
Additional relevant factors:							
none							
Assessment conducted by:			Assessment date	e(s):			
Dan Van Nostrand	9/1/2012, update February 2013						

Landscape Support by undeveloped land to the The wetland directly suppose no impediments to water since a bridge will be considered.		Floodpla Assessment date 9/1/2012,  Minimal (4)  Minimal level of support of wetland/surface water functions  by low density residential devel is little impediment to wildlife lity, temperature, and structured the creek. This area is propile the creek. There are no anti-	Not Present (0)  Condition is insufficient provide wetland/surface water functions  elopment and agriculture a movement into this polygore of Clear Creek. There apposed for a shading impact		
Impact (Shading)  Scoring Guidance The scoring of each dicator is based on what yould be suitable for the pe of wetland or surface water assessed  Condition is optimal and f supports wetland/surfac water functions  The floodplain bottomland by undeveloped land to the The wetland directly suppose no impediments to water since a bridge will be considered.	Daniel Van Nostrai  Moderate(7)  Condition is less than optimal, but sufficient to maintain most wetland/surface water functions  d forest is bordered on the west be ne north, south, and east. There earls and maintains the water quater flow between the floodplain and onstructed over the floodplain and onstructed over the floodplain and constructed over	Assessment date 9/1/2012,  Minimal (4)  Minimal level of support of wetland/surface water functions  by low density residential devel is little impediment to wildlife lity, temperature, and structured the creek. This area is propile the creek. There are no anti-	Not Present (0)  Condition is insufficient provide wetland/surface water functions  elopment and agriculture a movement into this polygore of Clear Creek. There apposed for a shading impact		
Scoring Guidance The scoring of each dicator is based on what yould be suitable for the pe of wetland or surface water assessed  Condition is optimal and f supports wetland/surfact water functions  The floodplain bottomland by undeveloped land to the The wetland directly suppose no impediments to water since a bridge will be considered.	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface water functions  d forest is bordered on the west be ne north, south, and east. There worts and maintains the water quater flow between the floodplain and onstructed over the floodplain and onstructed over the floodplain and onstructed over the floodplain and	Minimal (4)  Minimal level of support of wetland/surface water functions  by low density residential devel is little impediment to wildlife lity, temperature, and structured the creek. This area is progit the creek. There are no anti-	Not Present (0)  Condition is insufficient provide wetland/surface water functions  elopment and agriculture a movement into this polygore of Clear Creek. There apposed for a shading impact		
The scoring of each dicator is based on what yould be suitable for the pe of wetland or surface water assessed  Condition is optimal and f supports wetland/surface water functions  The floodplain bottomland by undeveloped land to the The wetland directly suppon impediments to water since a bridge will be considered.	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions  d forest is bordered on the west be ne north, south, and east. There worts and maintains the water quater flow between the floodplain and onstructed over the floodplain and onstructed over the floodplain and	Minimal level of support of wetland/surface water functions  by low density residential deve is little impediment to wildlife lity, temperature, and structured the creek. This area is propil the creek. There are no ant	Condition is insufficient provide wetland/surface water functions  elopment and agriculture a movement into this polygore of Clear Creek. There aposed for a shading impact		
dicator is based on what yould be suitable for the pe of wetland or surface water assessed  Condition is optimal and f supports wetland/surface water functions  The floodplain bottomland by undeveloped land to the The wetland directly suppone impediments to water since a bridge will be considered.	optimal, but sufficient to maintain most wetland/surface water functions  d forest is bordered on the west be ne north, south, and east. There worts and maintains the water quater flow between the floodplain and onstructed over the floodplain and onstructed over the floodplain and	wetland/surface water functions  by low density residential deve is little impediment to wildlife lity, temperature, and structured the creek. This area is propil the creek. There are no anti	provide wetland/surface water functions  elopment and agriculture a movement into this polygore of Clear Creek. There aposed for a shading impact		
Landscape Support by undeveloped land to the The wetland directly suppose no impediments to water since a bridge will be considered.	ne north, south, and east. There orts and maintains the water qua er flow between the floodplain and onstructed over the floodplain and	is little impediment to wildlife lity, temperature, and structu d the creek. This area is prop l the creek. There are no ant	movement into this polygore of Clear Creek. There a posed for a shading impact		
o pres or errent with 9 8					
(n/a for uplands) regime. The floodplain prevent erosion. The floodplain vegetation int	the creek appears to have excellent water quality, appropriate water inputs, and evidence of a typingime. The floodplain wetlands adjacent to the creek provide adequate water filtration and stability revent erosion. The water flow in the creek is currently unobstructed. The use of a bridge will help brodplain vegetation intact to continue to stabilize the soil surface. There will also be stormwater corridge to collect untreated stormwater and convey it to treatment ponds. The piling supported brising significantly impact the flow of the river.				
Vegetation and/or cleared and maintained	s a high diversity of canopy and s I as a powerline ROW. ERC loca opment plan will take the threaten minimized to the maxim	ted several threatened/endar led species locations into acc	ngered plant species in the		
pres or current with	minimized to the maxim	iniii exteri praedeable.			
8 6					
core = sum of above scores/30 (if uplands, divide by 20)  Preservation adjusting the surround of the surround		For impact asses			
w/o pres with 0.90 0.73	delta =	FL = delta x acres = 0.	.18		
If mitigation		For mitigation asse	essment areas		

RFG = delta/(t-factor x risk) =

Risk factor =

0.17

Site/Project Name		Application Number	ber Assessment Area Name or Number			
SR 87 Connector	PD&E				Polyg	gon 9A
FLUCCs code	Further classifica	tion (optional)		Impact	or Mitigation Site?	Assessment Area Size
615		Bottomland Fores	st Impact (Direct) 2.50			
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e.O	FW, AP, other local/state/federal	designation of importance)
Blackwater River III					N/A	
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, upla	nds		
This polygon includes the Clear C	Creek floodplain and is t	nerefore directly o	onnected via surfa	ice flov	v to the Blackwater Riv	er further downstream.
Assessment area description						
This floodplain/bottomland forest is mixture of hardwood evergr						
Significant nearby features			Uniqueness (collandscape.)	nsideri	ng the relative rarity in	relation to the regional
Munson Highway, Clear Creek			Blackwater Stream (Clear Creek) bisects the floodplain/bottomland forest.			
Functions			Mitigation for prev	vious p	ermit/other historic use	)
The floodplains are high quality wetlands that collect and convey water to Pensacola Bay. The creek is highly utilized by wildlife for cover and foraging. The intact floodplain helps prevent erosion, regulate water temperature, and maintain in-creek habitats.			N/A			
Anticipated Wildlife Utilization Base			Anticipated Utilization by Listed Species (List species, their legal			
that are representative of the asset be found)	ssment area and reasor	nably expected to	classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Black bear, deer, armadillo, amp invertebrat	hibians, birds, reptiles, ses within the river	small mammals,	The floodplain/bottomland forest is diverse and contains many state threatened plant species such as sundews, pitcher plants, bluestem, meadow beauty, and yellow-eyed grass. There is anticipated utilization by black bear. Clear Creek is not listed as Critical Habitat for the Gulf sturgeon or the reticulated Flatwoods salamander.			
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such a	s track	s, droppings, casings,	nests, etc.):
Additional relevant factors:						
none						
Assessment conducted by:			Assessment date	e(s):		
Dan Van Nostrand			9/1/2012, update February 2013			

Site/Projec	t Name			Application Number	Į.	Assessment Area Name or Number				
	SR	87 Connec	ctor PD&E				n 9A - Clear Creek			
mpact or N	Mitigation			Assessment conducted by:	F	Floodplain/Bottomland Forest Assessment date:				
	-	Impact (D	irect)	Daniel Van Nostra	nd	9/1/2012, u	pdate February 2013			
	g Guidance		Optimal (10)	Condition is less than I fully optimal, but sufficient to Minimal level of support of Condition is				Moderate(7) Minimal (4)		Not Present (0)
ndicator is would be s type of wel	oring of each based on wh suitable for th tland or surfa assessed	ne	Condition is optimal and fully supports wetland/surface water functions							
,	6)(a) Locatior Idscape Supp		by undeveloped land to the r The wetland directly supports no impediments to water flo	rest is bordered on the west b north, south, and east. There s and maintains the water qua by between the floodplain and proaches; however, the open	is little impediality, temperated the creek. T	iment to wildlife r ure, and structure his area is propo	movement into this poly e of Clear Creek. There used for a direct impact			
. , .	b)Water Envii /a for upland:		regime. The floodplain we prevent erosion. The wate	e excellent water quality, appi etlands adjacent to the creek p r flow in the creek is currently nize upstream flooding. This t impact for the bri	orovide adequ unobstructed floodplain/bott	ate water filtration.  The use of a betomland forest pos	on and stabilize the soil ridge over the open wa			
.500(6)(0	c)Community	structure								
	egetation an		cleared and maintained as groundcover. The developm	high diversity of canopy and s a powerline ROW. ERC loca ent plan will take the threater num extent practicable. This p approa	ated several th ned species lo polygon is pro	nreatened/endan cations into acco	gered plant species in to bunt and any impacts wi			
o pres or										
current	ı	with								
8		0								
Score = sui	m of above sco	ores/30 (if	If preservation as mitiga	ation.	F	or impact assess	sment areas			
upla	ands, divide by	20)	Preservation adjustmer	<u> </u>		•				
current r w/o pres		with	l		FL = d	elta x acres = 2.2	25			
0.90		0.00	Adjusted mitigation delt	ta =						
			1							
	F ***		If mitigation		Fo	r mitigation asse	ssment areas			
Delta = [with-current] Time lag (t-factor) =				1						

RFG = delta/(t-factor x risk) =

Risk factor =

0.90

Site/Project Name		Application Numbe	Per Assessment Area Name or Number			or Number		
SR 87 Connector	PD&E				Polyg	gon 10		
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area Size		
617	F	NAI - Basin Swar	mp Impact (Direct) 2.75					
Basin/Watershed Name/Number	Affected Waterbody (Clas	s)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)					
Blackwater River	III		N/A					
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, upla	nds				
This is an interior, deeper wetland			e slope / wet prair overland sheetflov		e wetlands convey wat	er to the south towards		
Assessment area description								
This basin wetland is fire suppress typically be in coppice if file								
Significant nearby features			Uniqueness (considering the relative rarity in relation to the regional landscape.)					
		None						
Functions			Mitigation for pre	vious p	permit/other historic use	)		
This wetlands provides water filtration, water retention, foraging and habit for wildlife.			t N/A					
Anticipated Wildlife Utilization Base that are representative of the asset be found)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)					
Black bear, deer, armadillo, amp invertebrat	phibians, birds, reptiles, stes within the river	small mammals,	White topped pitcher plant was observed in this wetland and it is anticipated that other threatened plant species would be present with periodic fire. This area is also most likely used by the black bear population in the vicinity.					
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or o	other signs such a	s track	s, droppings, casings,	nests, etc.):		
		None during fie	eld surveys					
Additional relevant factors:								
none								
Assessment conducted by:			Assessment date	e(s):				
Dan Van Nostrand	10/1/2012, update February 2013							

Site/Project Name		Application Number	Accessment Are	Assessment Area Name or Number			
SR 87	PD&E	TAPPIIGATION NUMBER		Polygon 10 - Basin Swamp			
Impact or Mitigation		Assessment conducted by:	Assessment dat	Assessment date:			
Impact	(Direct)	Daniel Van Nostrar	nd 10/1/2012	10/1/2012, update February 2013			
Scoring Guidanas	Ontimal (40)	Moderate(7)	Minimal (4)	Not Present (0)			
Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10)  Condition is optimal and fully supports wetland/surface water functions	pports wetland/surface maintain most wetland/surface water provide wetland/					
	T						
.500(6)(a) Location and Landscape Support  w/o pres or current with 6 0	to the south and agricultur value for wildlife utilization. T wildlife movement to and f	ered by undeveloped land to the all lands to the east. Portions of the proximal residential development in the proximal from the adjacent flow to and from the basin swar alternative 1 or	of this polygon have been cle opment and adjacent agricultu nt wet prairie / seepage slope amp. This area is proposed fo	ared which decrease their iral lands somewhat limit the has been ditched, which			
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current with 7	ropriate hydroperiod. The the subcanopy and shrub cleared within the powerline inding land uses. There are tive 2. Culverts or elevated olygon to prevent damming the corridor areas.						
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current  with  0  The majority of this basin swamp polygon has been disturbed by clearing either for agricultural operation powerline ROW maintenance. The cleared portions lack the appropriate canopy, but have divers grounded to the light penetration to the ground. Typical basin swamps would have diverse canopies and varied ground in gaps between canopy. This polygon is proposed for direct impact by either alternative 1 or alternative 1.							
<u> </u>							
Score = sum of above scores/30 uplands, divide by 20)  current or w/o pres with 0.63 0	If preservation as mitigation adjustmer Adjusted mitigation delt	nt factor =	For impact asse: FL = delta x acres = 1				
	If mitigation			<u> </u>			
Delta = [with-current]	Time lag (t-factor) =		For mitigation ass				
0.63 Risk factor = RFG = delta/(t-factor x risk) =							

Site/Project Name		Application Numbe	ber Assessment Area Name or Number			
SR 87 Connector F	PD&E				Poly	gon 11
FLUCCs code	Further classificat	tion (optional)		Impact of	or Mitigation Site?	Assessment Area Size
643	FNAI - Se	eepage Slope / W	/et Prairie	l I	Impact (Direct)	8.14
	Affected Waterbody (Class	is)	Special Classificati	ion (i.e.OF\	W, AP, other local/state/federa	designation of importance)
Blackwater River	III				N/A	
Geographic relationship to and hydr	ologic connection with	wetlands, other s	surface water, upla	ands		
The seepage slope / wet prairie dra			ver via overland sl djacent agricultura		and through a confir	ned ditch that appears to
Assessment area description						
The ss/wp is fire suppressed and	has a dense canopy of	of pine and bay tre agricultural		nder has	been maintained as	a powerline ROW and
Significant nearby features			Uniqueness (co landscape.)	nsiderin	g the relative rarity in	relation to the regional
ı		None				
Functions		Mitigation for pre	vious pe	ermit/other historic us	е	
This wetlands provides water filtration, water retention, foraging and habit for wildlife.			t N/A			
Anticipated Wildlife Utilization Bases that are representative of the asses be found)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Black bear, deer, armadillo, amph invertebrate	nibians, birds, reptiles, s ss within the river	small mammals,	White topped pitcher plant was observed in this wetland and it is anticipated that other threatened plant species would be present with periodic fire. This area is also most likely used by the black bear population in the vicinity.			
Observed Evidence of Wildlife Utiliz	ation (List species direc	ctly observed, or	other signs such a	as tracks	s, droppings, casings,	, nests, etc.):
		None during fie	eld surveys			
Additional relevant factors:						
none						
Assessment conducted by:			Assessment date	e(s):		
Dan Van Nostrand		10/1/2012, update February 2013				

	(	ns 62-345.500 and .600,	,		
Site/Project Name		Application Number	Assessment Ar	ea Name or Number	
SR 87 I	PD&E		Polygon 11 -	Seepage Slope/Wet Prairie	
mpact or Mitigation		Assessment conducted by:	Assessment da	te:	
Impact (	Direct)	Daniel Van Nostra	nd 10/1/2012	2, update February 2013	
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)	
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions				
.500(6)(a) Location and Landscape Support  t/o pres or current with	ROW and an agricultural fie due to the agricultural land	cent to undeveloped land to t ld to the south. There is mind . This wetland is connected s nis wetland is proposed for dir	or limitation to wildlife moven south through wetlands and a	nent to and from this polygor a confined ditch through the	
.500(6)(b)Water Environment (n/a for uplands) //o pres or current with	wetland lacks community z strata woody species as o	ate hydrophytic vegetation an onation because the fire regin oppice. There is no evidence oresent. This area is propose	ne is not adequate to mainta of siltation in this wetland fr	in the subcanopy and shrub om surrounding land uses.	
8 0 .500(6)(c)Community structure					
Vegetation and/or     Benthic Community	polygon area is maintained	n-disturbed portion of this poly as a powerline easement and proposed for a direct impact b	there is no canopy due to o	continual maintenance. This	
/o pres or					
current with	4				
7 0					
Score = sum of above scores/30(i	f If preservation as mitigate	ation,	For impact asse	essment areas	
uplands, divide by 20)	Preservation adjustmen		·		
current r w/o pres with	Adjusted mitigation del		FL = delta x acres = 5	5.97	
0.73			<u> </u>		
	If mitigation			<del> </del>	
Delta = [with-current]	Time lag (t-factor) =		For mitigation ass	sessment areas	
-	1 1 * '	i i	I		

RFG = delta/(t-factor x risk) =

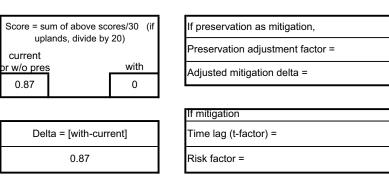
Risk factor =

0.73

Site/Project Name		Application Numbe	er Assessment Area Name or Number			or Number	
SR 87 Connector PD&E - Alterna	ative 1 only				Poly	gon 12	
FLUCCs code	Further classifica	tion (optional)		Impact	or Mitigation Site?	Assessment Area Size	
630	F	NAI - Dome Swan	np		Impact (Direct)	1.43	
Basin/Watershed Name/Number Affect	ted Waterbody (Clas	s)	Special Classification	on (i.e.OF	W, AP, other local/state/federa	I designation of importance)	
Blackwater River				N/A			
Geographic relationship to and hydrolog	wetlands, other su	urface water, upla	nds				
This is an	isolated wetland s	system that is surr	ounded by well dr	ained s	andhill uplands.		
Assessment area description							
This dome swamp wetland is fire su periodically burned this we							
Significant nearby features		Uniqueness (co landscape.)	nsiderir	ng the relative rarity in	relation to the regional		
SR 87 N		None					
Functions		Mitigation for previous permit/other historic use					
This wetlands provides water filtration, water retention, foraging and habita for wildlife.			t N/A				
Anticipated Wildlife Utilization Based on that are representative of the assessment be found)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Black bear, deer, armadillo, amphibiar invertebrates wit		small mammals,	No threatened or endangered species were observed in this polygon area, but it is anticipated that a similar plant composition to the other basin wetlands would exist with more frequent fires.				
Observed Evidence of Wildlife Utilization	(List species dire	ctly observed, or o	I other signs such a	s tracks	s, droppings, casings,	nests, etc.):	
		None during fie	ald oursesy				
		None during he	eid Suivey				
Additional relevant factors:							
none							
Assessment conducted by:			Assessment date	e(s):			
Dan Van Nostrand			10/1/2011, update February 2013				

Site/Project Name	Application Number	Assessment Area Name or Number
SR 87 Connector PD&E - Alternative 1 only		Polygon 12 - Dome Swamp
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact (Direct)	Daniel Van Nostrand	10/1/2011, update February 2013
Scoring Guidance Ontimal (10)	Moderate(7)	Minimal (4) Not Present (0)

Impact or I	Mitigation			Assessment conducted by:		Assessment date	<u>):</u>	
	-	Impact (D	irect)	Daniel Van Nostra	10/1/2011, update February 2013			
Scorin	ng Guidance	7	Optimal (10)	Moderate(7)	l Mi	nimal (4)	Not Presen	t (O)
The sco indicator is would be type of we	oring of each s based on wha suitable for the etland or surfac r assessed	Э	Condition is optimal and fully supports wetland/surface water functions	Condition is less than	Condition is insu provide wetland water funct	ifficient t		
	(6)(a) Location ndscape Suppo		provides the functions to suppressed understory sligh many breeding amphibiar	olated wetland that has unlim wildlife and downstream wetla htly limits the wildlife utilization ns and reptiles since there is e n fish. This wetland is propos	ands that it wetlevidence that	ould provide in op and system; howe t it fill with water e	otimal condition. T ever it is suitable h ephemerally and do	he fire abitat fo
	b)Water Environ/a for uplands		suitable for many species community zonation along t	ate hydrophytic vegetation and that require ephemeral ponds he ecotone adjacent to the up ub strata woody species as co alterna	s as a compo pland becaus oppice. This	onent of their life one one of the fire regime in t	cycles. The wetlan	id lacks maintai
1. \	c)Community s Vegetation and enthic Commu	l/or		s appropriate; however the gr d shrub and sub-canopy. This				
	um of above scor ands, divide by 2	`	If preservation as mitigated Preservation adjustment Adjusted mitigation deli	nt factor =		For impact asses delta x acres = 1.2		
			If mitigation		F	or mitigation asse	essment areas	



For mitigation assessment areas RFG = delta/(t-factor x risk) =

Site/Project Name		Application Number	er Assessment Area Name or Number				
SR 87 Connector PD&E - A	Iternative 1 only				Poly	gon 13	
FLUCCs code	Further classificat	tion (optional)		Impact	or Mitigation Site?	Assessment Area Size	
643	Seep	age Slope / Wet F	Prairie Impact (Direct) 0.25				
Basin/Watershed Name/Number	Affected Waterbody (Class)  Special Classification (i.e.OFW, AP, other local/state/federal designation)					designation of importance)	
Blackwater River	III				N/A		
Geographic relationship to and hyd	rologic connection with	wetlands, other su	urface water, uplai	nds			
This seepage slope / wet prairie p	polygon is bisected by a	dirt road and con	nected under the	road vi	ia a culvert; however, t	he wetland is isolated.	
Assessment area description							
The	ss/wp is fire suppressed	d, has been bisect	ed by a dirt road,	and ha	as been cleared.		
Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)						
SR	None						
Functions		Mitigation for previous permit/other historic use					
This wetlands provides water filtration, water retention, foraging and habita for wildlife.			N/A				
Anticipated Wildlife Utilization Base that are representative of the asses be found)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Black bear, deer, armadillo, ampl invertebrate	hibians, birds, reptiles, s es within the river	small mammals,	No T&E plant species were observed within this wetland; however, with appropriate management it is expected that there would be higher species diversity.				
Observed Evidence of Wildlife Utiliz	zation (List species direc	ctly observed, or o	L ther signs such a	s track	s, droppings, casings,	nests, etc.):	
		None doning G	ld				
		None during fie	eia survey				
Additional relevant factors:							
none							
Assessment conducted by:			Assessment date	e(s):			
Dan Van Nostrand	10/1/2011, update February 2013						

lo:: /D : .				[A 11 11 A]				
Site/Project			All C 4 I	Application Number		Assessment Area Name or Number		
		tor PD&E	- Alternative 1 only			Polygon 13 - Seepage Slope/Wet Prairie		
Impact or M	· ·			Assessment conducted by:		Assessment date		040
	I	Impact (D	irect)	Daniel Van Nostran	ia	10/1/2011,	update February 2	013
Scoring Guidance Optimal (10)				Moderate(7)	Minimal (4) Not Presen			t (0)
	ring of each based on wha	h+	Condition is optimal and fully	Condition is less than optimal, but sufficient to	Minimal le	evel of support of	Condition is insu	fficient to
	suitable for the		supports wetland/surface	maintain most	l	/surface water	provide wetland	
	land or surface assessed	е	water functions	wetland/surface water functions		functions water functions		ons
Water	assesseu			lunctions				
	S)(a) Location adscape Suppo		limitation to wildlife movemen been cut in half by Oakland	jacent to undeveloped land an It to and from this polygon due d Drive, a dirt road. There is a vithin the wetland. This wetlan	to the resid	lential land. This weath the road; how	wetland is isolated vever it has impacte	and has
wetland lacks commun strata woody species				ate hydrophytic vegetation and onation because the fire regim oppice. There is no evidence ic soils present. This area is p	e is not ade of siltation in	quate to maintain to this wetland from	the subcanopy and n surrounding land	d shrub
1. V	Community steeds	/or		-disturbed portion of this polyg red and there is no canopy du direct impact bye ei	e to continua	al maintenance. T		
Score = sum of above scores/30 (if uplands, divide by 20) current			If preservation as mitiga	ation,		For impact assess	sment areas	
			Preservation adjustmen	Preservation adjustment factor =  Adjusted mitigation delta =  FL = delta x acres = 0.16				
pr w/o pres with		Adjusted mitigation delt	lb					
0.63		0						
			If mitigation		г—			l
Delta = [with-current] Time lag (t-factor) =					F	or mitigation asse	ssment areas	
Delta = [with-current]					RFG	= delta/(t-factor x i	risk) =	
0.63			Risk factor =		'`' '	delia/(t-laciol X l	110K) =	

Site/Project Name	Application Numbe	nber Assessment Area Name or Nu			or Number		
SR 87 Connector PD&E - A				Polyg	Polygon 14		
FLUCCs code	Further classifica	Further classification (optional)		Impac	et or Mitigation Site?	Assessment Area Size	
643	Seep	Seepage Slope / Wet F		Secondary and Cumulative lmpacts adjacent to shading impacts		60.07	
Basin/Watershed Name/Number	Affected Waterbody (Clas-	s)	Special Classification	tion (i.e.OFW, AP, other local/state/federal designation of importance)			
Blackwater River	III		N/A				
Geographic relationship to and hyd	rologic connection with	wetlands, other su	urface water, upla	nds			
Wetlands within this secondary and reticulated Flatwoods salamander of			connect to either t				
Assessment area description							
These wetlands are similar in ha	ibitat quality to impact p	olygons 1, 3, 4, 8, Prairie hab		ands a	reas contain Bottomland	d Hardwood and Wet	
Significant nearby features			Uniqueness (considering the relative rarity in relation to the regional landscape.)				
Blackwater River, Coldwater C Highway, Blac	Creek, RFS2 Critical Hab kwater Heritage Trail	oitat, Munson					
Functions			Mitigation for previous permit/other historic use				
Water filtration, sediment stabilizat	ion, wildlife habitat, river	r and creek buffer	r N/A				
Anticipated Wildlife Utilization Base that are representative of the asses be found)				T, SS	by Listed Species (List s C), type of use, and inte	•	
Migratory birds, small-medium-	large mammals, reptiles	s, amphibians	many threatened plant species ( sundews, pitcher plants, lily, etc.), Flatwoods salamander, black bear.				
Observed Evidence of Wildlife Utiliz	zation (List species direc	ctly observed, or c	ther signs such a	s track	ks, droppings, casings, r	nests, etc.):	
		None during fie	old curvov				
		None during he	eid Suivey				
Additional relevant factors:							
Assessment conducted by:			Assessment date	e(s):			
Daniel Van Nostrand	9/1/2012, update February 2013						

Site/Project Name SR 87 Connec	tor PD&E	Application Number		Assessment Area Name or Number Polygon 14 - S/C Impacts (shading)	
mpact or Mitigation		Assessment conducted by:	Assessment	date:	
Secondary and Cumulation	ve Impacts Shading	Daniel Van Nostrar	nd 9/1/20	9/1/2012, update February 2013	
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)	
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than		of Condition is insufficient to	
.500(6)(a) Location and Landscape Support  //o pres or current with 9	Blackwater River, Clear Cree	ek, and the RFS2 Critical Hab	itat unit. There is minor lin he minimization of impacts	pacts from the bridges over the nitation to wildlife movement to by bridging there will be mino	
.500(6)(b)Water Environment (n/a for uplands)  v/o pres or current with	Due to the minimization of im	npacts by bridging these wetla wetlands outside of the		ater, there will be no impacts to	
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  //o pres or current with 9 8		ndary and cumulative impacts vever, it is anticipated that the wetland vegetation soon aft	wetlands in these polygon	s will regenerate with native,	
Score = sum of above scores/30 (if uplands, divide by 20)	If preservation as mitigate Preservation adjustment		For impact as	ssessment areas	
current or w/o pres with	Adjusted mitigation delt	a =	FL - della x acres	= 4.00	
	Adjusted mitigation delt	a =	FL - della x acres	= 4.00	
r w/o pres with	Adjusted mitigation delt	a =			
r w/o pres with		a =		assessment areas	

Site/Project Name		Application Number Assessment Area Nam			e or Number		
SR 87 Connector	PD&E				Poly	gon 15	
FLUCCs code	Further classifica	tion (optional)		Impac	et or Mitigation Site?	Assessment Area Size	
643, 617, & 630	Seepage Slope	Seepage Slope / Wet Prairie, Ba Dome Swamp		sin Swamp, and Secondary & Cumulativ adjacent to direct impac		Alt. 1 = 79.33 & Alt. 2 = 73.94	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.0	Π (i.e.OFW, AP, other local/state/federal designation of importance)		
Blackwater River	III		N/A				
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, upla	ands			
Wetlands within this secondary ar wetlands directly con	nd cumulative impact po nect to either the Black						
Assessment area description							
These wetlands are similar in ha		olygons 2, 5, 6, 7, s, basin swamps,			e wetlands areas conta	in seepage slopes/wet	
Significant nearby features			Uniqueness (considering the relative rarity in relation to the regional landscape.)				
SR 87 North, Munson Highway, B Critical Habitat, Munson Hi							
Functions			Mitigation for pre	vious	permit/other historic us	е	
Water filtration, sediment stabilizat	on, wildlife habitat, rive	r and creek buffer	r N/A				
Anticipated Wildlife Utilization Base that are representative of the asset be found)				T, SS	by Listed Species (List of C), type of use, and into		
Migratory birds, small-medium	s, amphibians	many threatened plant species ( sundews, pitcher plants, lily, etc.) and black bear.					
Observed Evidence of Wildlife Utili:	zation (List species dire	ctly observed, or	l other signs such a	as trac	ks, droppings, casings,	nests, etc.):	
		None during fie	eld survey				
Additional relevant factors:							
Assessment conducted by:			Assessment date	e(s):			
Daniel Van Nostrand	9/1/2012, update February 2013						

Site/Project Name			Application Number		Assessment Area Name or Number		
_	87 Connec	tor PD&F	, pphodion runiber	ľ		n 15 - S/C Impacts	
Impact or Mitigation	or connec	, or i bac	Accomment and usted by		Assessment date	<u> </u>	'
	ative Impac	cts Adjacent to Direct Impact	Assessment conducted by:  Daniel Van Nostrar				<b>013</b>
	Areas	8	Daniel Vali Nostial	iu	9/1/2012, update February 2013		
Scoring Guidance		Optimal (10)	Moderate(7)	Mini	imal (4)	Not Presen	t (0)
The scoring of each indicator is based on wh		Candition is antimal and fully	Condition is less than		al of augment of	Condition is insu	
would be suitable for th		Condition is optimal and fully supports wetland/surface	optimal, but sufficient to maintain most		el of support of urface water	provide wetland	
type of wetland or surface	се	water functions	wetland/surface water functions water fun				ions
water assessed			functions				
.500(6)(a) Location Landscape Supp w/o pres or current 8		alternatives. The new roa	tive wetland polygon is adjace adway will limit wildlife movem Further, water flows may be al roadway features chang	ent within the tered due to re	general vicinity or equired water col	ause more likeliho	od of
.500(6)(b)Water Envir (n/a for uplands w/o pres or current 8		Due to the proposed project	impacts, flow between wetlan from its cur		ide of the propos	sed corridor will be	altered
.500(6)(c)Community	structure	The said has been a single said.		- £ 41 41			
Vegetation and     Benthic Commu		There will be only minor impacts to the vegetative structure of the wetlands in the secondary and cumulative impact polygons during construction. Following construction it is anticipated that any disturbed vegetation will regenerate with native wetland vegetation; however, a new roadway introduces a vector for the dispersal of invasive plant species.					
w/o pres or current 7	with 6						
		1 1	<del></del> 1	1			i
Score = sum of above scores/30 (if uplands, divide by 20)  current or w/o pres with		If preservation as mitiga	ation,	F	or impact assess	sment areas	
		Preservation adjustmen	t factor =	FL = de	elta x acres = Alf	t. 1: 18.51 & Alt.	
		Adjusted mitigation delt	a =	<b>2</b> : 17.2			
0.77	0.53						I
•		If militarian		·			1
D-14- 5 '''	47	If mitigation		Fo	r mitigation asse	ssment areas	
Delta = [with-curre	entj	Time lag (t-factor) =		D=0	-1-14-1/15	-:-1->	
0.23		Risk factor =		RFG =	delta/(t-factor x	risk) =	

SR 87 CONNECTOR			Wetland Evaluation Report
	Appendix	D	
	Wetland Polygon Pl		



#### Appendix D – Wetland/UMAM Polygon Photographs

#### A. Alignments 1 and 2

#### 1. Polygon 1A & 1 – Bottomland Forest (FLUFCS 615)







#### 2. Polygon 2 – Basin Swamp (FLUFCS 617)



#### 3. Polygon 3 – Seepage Slope / Wet Prairie (FLUFCS 643)







#### 4. Polygon 4 – Basin Swamp (FLUFCS 617)







#### 5. Polygon 5 – Seepage Slope / Wet Prairie (FLUFCS 643)





#### 6. Polygon 6 – Basin Swamp (FLUFCS 617)







#### 7. Polygon 7 – Seepage Slope / Wet Prairie (FLUFCS 643)







#### 8. Polygon 8 – Seepage Slope / Wet Prairie (FLUFCS 643)







#### 9. Polygon 9 – Bottomland Forest (FLUFCS 615)







#### 10. Polygon 10 – Basin Swamp (FLUFCS 617)







### 11. Polygon 11 – Seepage Slope / Wet Prairie (FLUFCS 643)







#### B. Alignment 1 Only

### 1. Polygon 12 – Dome Swamp (FLUFCS 630)







### 2. Polygon 13 – Seepage Slope / Wet Prairie (FLUFCS 643)



SR 87 CONNECTOR	Wetland Evaluation Report
A non an div F	
Appendix E	
FDEP State Lands Determina	ation



# Florida Department of Environmental Protection

Marjory Stoneman Douglas Building 3900 Commonwealth Boulevard Tallahassee, Florida 32399-3900 Rick Scott Governor

Jennifer Carroll Lt. Governor

Herchel T. Vinyard, Jr. Secretary

October 11, 2011

Mr. Dan Van Nostrand Senior Project Manager Ecological Resource Consultants, Inc. Corporate Office Panama City Beach 100 Amar Place Panama City Beach, Florida 32413

Dear Mr. Nostrand:

Examination of the information you furnished on September 28, indicates that submerged lands lying below the mean high water line of Clear Creek in Section 24, Township 2 North, Range 28 West and the Blackwater River in Section 19, Township 2 North, Range 27 West are state owned.

The conclusions stated herein are based on a review of records currently available within the Department of Environmental Protection as supplemented, in some cases, by information furnished by the requesting party. Additional records will be reviewed if provided.

If you have questions regarding this determination, please contact Sandra Harris, Planning Manager, at the above address, mail stop No. 108 or by telephone at (850) 245-2788.

Sincerely,

Terry E. Wilkinson, Chief

Bureau of Survey of Mapping

Division of State Lands

TEW/sh

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SR 87 CONNECTOR		Wetland Evaluation Report
	Appendix G	
	Typical Sections Package	

## STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

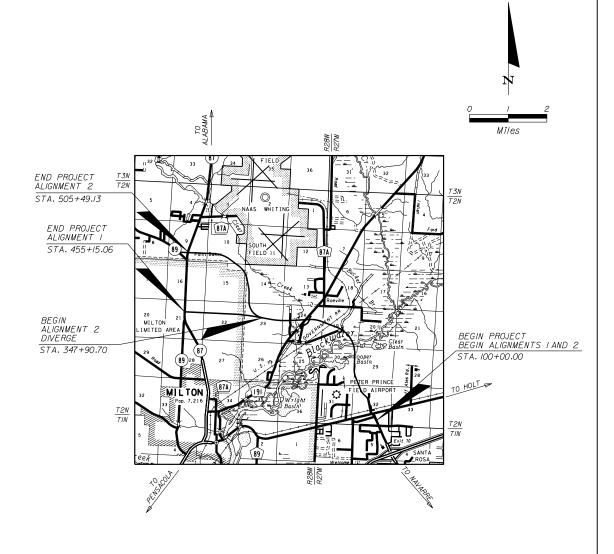
## TYPICAL SECTION PACKAGE

FINANCIAL PROJECT ID
416748-3-22-01 AND 416748-3-22-02

SR 87 CONNECTOR FROM

SR 87S @ SR 10 (US 90) TO SR 87N

SANTA ROSA COUNTY





#### PROJECT IDENTIFICATION

FINANCIAL PROJECT ID 416748-3-22-01 AND 416748-3-22-02 COUNTY (SECTION) SANTA ROSA (58040)

ALIGN. I AND 2; STA. 100+00 - 253+60 (FROM S. OF US 90 TO THE BLACKWATER RIVER BRIDGE)

PROJECT DESCRIPTION ALIGN. 1: STA. 435+29 - 455+15 (AT CONNECTION TO SR 87N)

ALIGN. 2: STA. 464+44 - 505+49 (AT CONNECTION TO SR 87N)

#### **PROJECT CONTROLS**

FUNCTIONAL CLASSIFICATION  () RURAL (X) URBAN  () FREEWAY/EXPWY. () MAJOR COLL. (X) PRINCIPAL ART. () MINOR COLL. () MINOR ART. () LOCAL	Yes No  () (X) NATIONAL HIGHWAY SYSTEM  () (X) FLORIDA INTRASTATE HIGHWAY SYSTEM  () (X) STRATEGIC INTERMODAL SYSTEM  (X) () STATE HIGHWAY SYSTEM  () (X) OFF STATE HIGHWAY SYSTEM
ACCESS CLASSIFICATION  () I - FREEWAY () 2 - RESTRICTIVE w/Service Roads (X) 3 - RESTRICTIVE w/660 ft. Connecting Spacing () 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing () 5 - RESTRICTIVE w/440 ft. Connection Spacing () 6 - NON- RESTRICTIVE w/1320 ft. Signal Spacing () 7 - BOTH MEDIAN TYPES	TRAFFIC           YEAR         AADT           CURRENT         2009         0           OPENING         2015         10,731           DESIGN         2035         19,746           DISTRIBUTION           DESIGN         SPEED         45         K         9.0%           POSTED         SPEED         45         D         58.7%
CRITERIA  (X) NEW CONSTRUCTION / RECONSTRUCTION  () RRR INTERSTATE / FREEWAY  () RRR NON-INTERSTATE / FREEWAY  () TDLC / NEW CONSTRUCTION / RECONSTRUCTION  () TDLC / RRR  () MANUAL OF UNIFORM MINIMUM STANDARDS	POSTED SPEED 45 D 58.7%.  T <sub>24</sub> 5%.  DESIGN SPEED APPROVALS  JOHN S. GOLDEN, P.E. DISTRICT DESIGN ENGINEER  DATE
(FLORIDA GREENBOOK) (OFF-STATE HIGHWAY ONLY)	JARED PERDUE, P.E. DISTRICT TRAFFIC OPERATIONS ENGINEER  DATE

## LIST ANY POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION ELEMENTS:

ACCESS MANAGEMENT: CONNECTION SPACING - DRIVEWAY TURNOUTS JUST NORTH OF US 90 - ALIGNMENTS | AND 2

CONNECTION SPACING - DRIVEWAY TURNOUTS JUST EAST OF SR 87N - ALIGNMENT |

MEDIAN OPENING SPACING - BOBBY BROWN ROAD AT BEGINNING OF ALIGNMENTS | AND 2

MEDIAN OPENING SPACING - SEASON DRIVE AT THE END OF ALIGNMENT 2

LIST MAJOR STRUCTURES LOCATION/DESCRIPTION - REQUIRING INDEPENDENT STRUCTURE DESIGN:

BRIDGE OVER BLACKWATER RIVER, BLACKWATER HERITAGE TRAIL AND WETLANDS

LIST MAJOR UTILITIES WITHIN PROJECT CORRIDOR:

AT&T, AT&T DISTRIBUTION, CITY OF MILTON, CSX RAILROAD, EAST MILTON WATER SYSTEM, GULF POWER, MCI, MEDIACOM, OKALOOSA GAS, POINT BAKER WATER SYSTEM, QWEST, SOUTHERN LIGHT, SPRINT/NEXTEL

LIST OTHER INFORMATION PERTINENT TO DESIGN OF PROJECT:

SR 87 HAS BEEN DESIGNATED AS A "HURRICANE EVACUATION ROUTE"

#### PROJECT IDENTIFICATION

FINANCIAL PROJECT ID 416748-3-22-01 AND 416748-3-22-02 COUNTY (SECTION) SANTA ROSA (58040)

ALIGN. 1: STA. 253+60 - 435+29 AND ALIGN. 2: STA. 253+60 - 464+44

PROJECT DESCRIPTION (FROM N. OF THE BLACKWATER RIVER BRIDGE TO E. OF SR 87N CONNECTION)

#### **PROJECT CONTROLS**

FUNCTIONAL CLASSIFICATION  (X) RURAL  () URBAN  () FREEWAY/EXPWY. () MAJOR COLL.  (X) PRINCIPAL ART. () MINOR COLL.  () MINOR ART. () LOCAL	HIGHWAY SYSTEM  Yes No  () (X) NATIONAL HIGHWAY SYSTEM  () (X) FLORIDA INTRASTATE HIGHWAY SYSTEM  () (X) STRATEGIC INTERMODAL SYSTEM  (X) () STATE HIGHWAY SYSTEM  () (X) OFF STATE HIGHWAY SYSTEM
ACCESS CLASSIFICATION  () I - FREEWAY () 2 - RESTRICTIVE w/Service Roads (X) 3 - RESTRICTIVE w/660 ft. Connecting Spacing () 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing () 5 - RESTRICTIVE w/440 ft. Connection Spacing () 6 - NON- RESTRICTIVE w/1320 ft. Signal Spacing () 7 - BOTH MEDIAN TYPES	TRAFFIC           YEAR AADT           CURRENT         2009         0           OPENING         2015         10,731           DESIGN         2035         19,746           DISTRIBUTION           DESIGN SPEED         65         K 9.0%           POSTED SPEED         60         D 58.7%
CRITERIA  (X) NEW CONSTRUCTION / RECONSTRUCTION  () RRR INTERSTATE / FREEWAY  () RRR NON-INTERSTATE / FREEWAY  () TDLC / NEW CONSTRUCTION / RECONSTRUCTION  () TDLC / RRR  () MANUAL OF UNIFORM MINIMUM STANDARDS  (FLORIDA GREENBOOK) (OFF-STATE HIGHWAY ONLY)	JOHN S. GOLDEN, P.E. DISTRICT DESIGN ENGINEER  DATE  JARED PERDUE, P.E. DISTRICT TRAFFIC OPERATIONS ENGINEER

## LIST ANY POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION ELEMENTS:

NONE

LIST MAJOR STRUCTURES LOCATION/DESCRIPTION - REQUIRING INDEPENDENT STRUCTURE DESIGN:

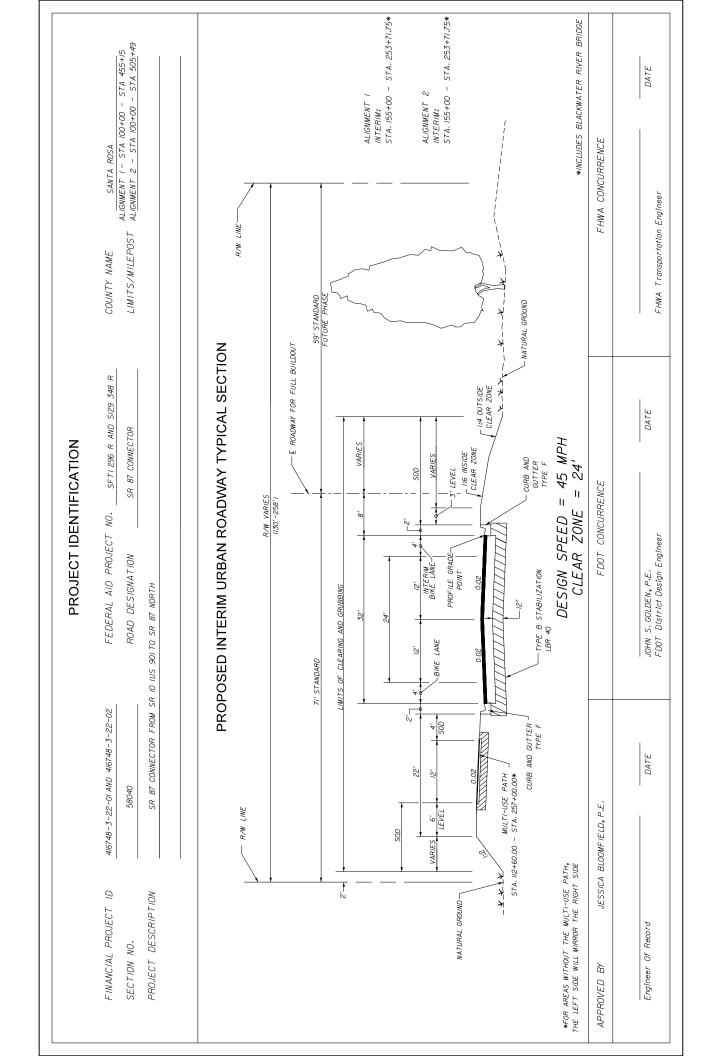
BRIDGE OVER CLEAR CREEK

LIST MAJOR UTILITIES WITHIN PROJECT CORRIDOR:

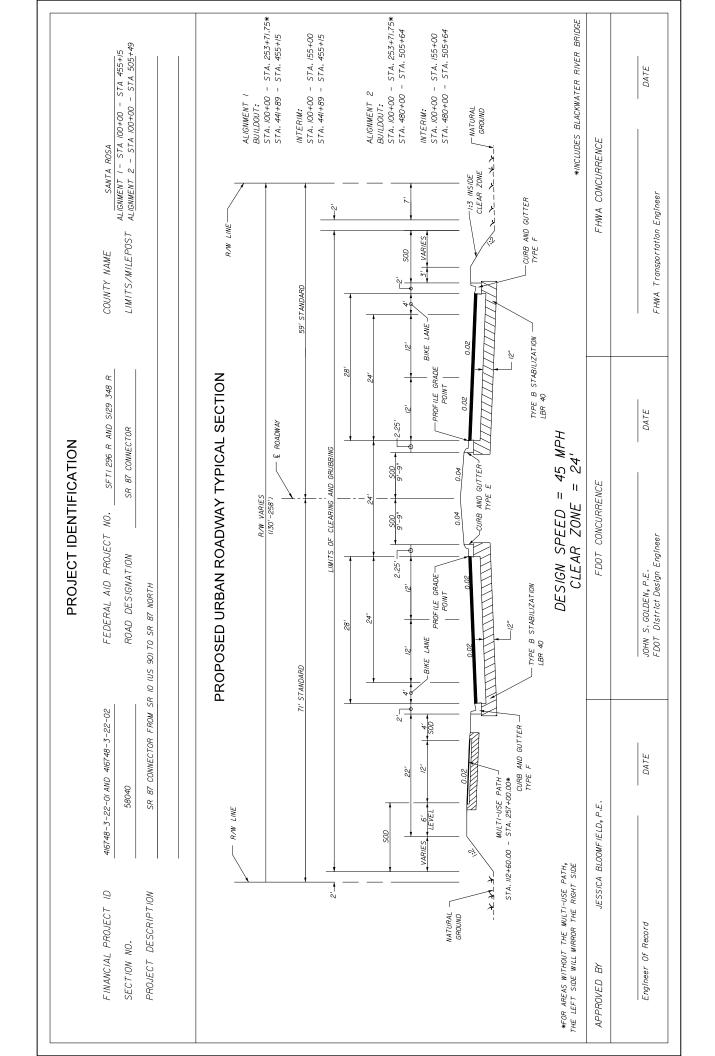
AT&T, AT&T DISTRIBUTION, CITY OF MILTON, CSX RAILROAD, EAST MILTON WATER SYSTEM, GULF POWER, MCI, MEDIACOM, OKALOOSA GAS, POINT BAKER WATER SYSTEM, QWEST, SOUTHERN LIGHT, SPRINT/NEXTEL

LIST OTHER INFORMATION PERTINENT TO DESIGN OF PROJECT:

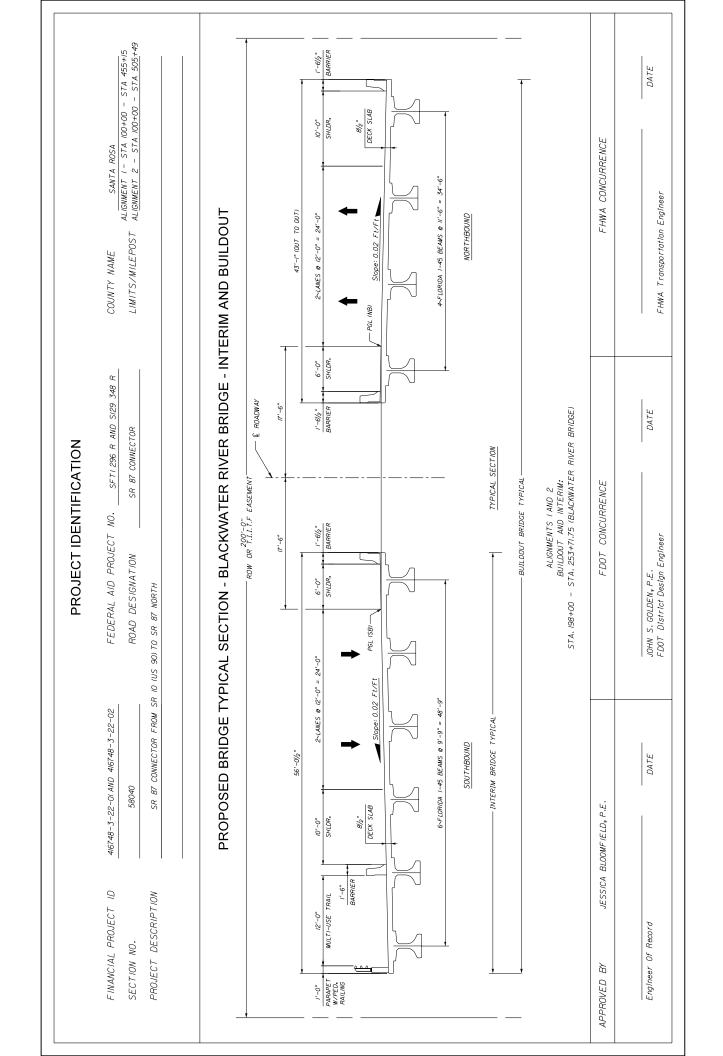
SR 87 HAS BEEN DESIGNATED AS A "HURRICANE EVACUATION ROUTE"

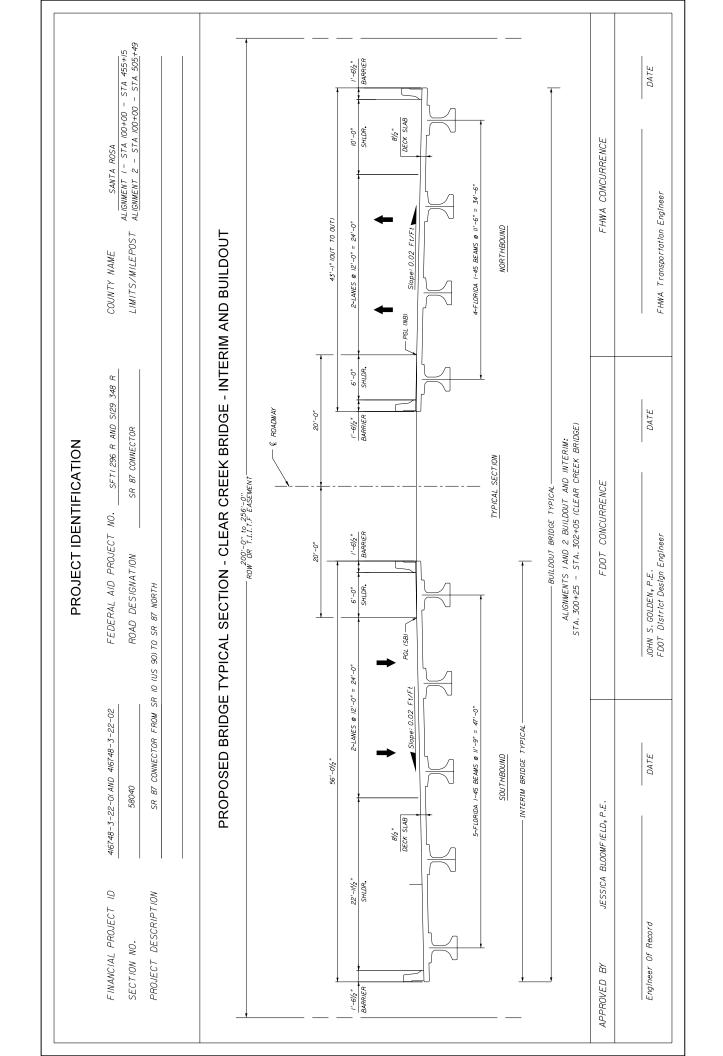


COUNTY NAME SANTA ROSA ALGNMENT 1- STA 100+00 - STA 455+15 LIMITS/WILEPOST ALGNMENT 2 - STA 100+00 - STA 505+49	STION  BAN LIME  BAN LIME  WATER OF CONSTRUCTION  WATER OF CONSTRUCTION  WATER OF CONSTRUCTION  ALIGNMENT I  BUILDOUT:  STA. 25371775 - STA. 480+00*  STA. 25371775 - STA. 480+00*	FHWA CONCURRENCE	DATE DATE
2-01 AND 416748-3-22-02 FEDERAL AID PROJECT INO. SFT1 296 R AND SI29 348 R 58040 SR 87 CONNECTOR FROM SR 10 (US 90) TO SR 87 NORTH	PROPOSED INTERIM RURAL ROADWAY TYPICAL SECTION  SHORT LE GRACE  PROFILE GRACE  PR	FDOT CONCURRENCE	JOHN S. GOLDEN, P.E. FDOT District Design Engineer
FINANCIAL PROJECT ID 416748-3-22-01 AND 416748-3-22-02 SECTION NO. SRO40 PROJECT DESCRIPTION SR 87 CONNECTOR FROM S	Natural Ground  DEPTH AND WIDTH VARY  SEE CROSS SECTIONS  PR. LIME  TURF  TURF	APPROVED BY JESSICA BLOOMFIELD, P.E.	Engineer Of Record DATE



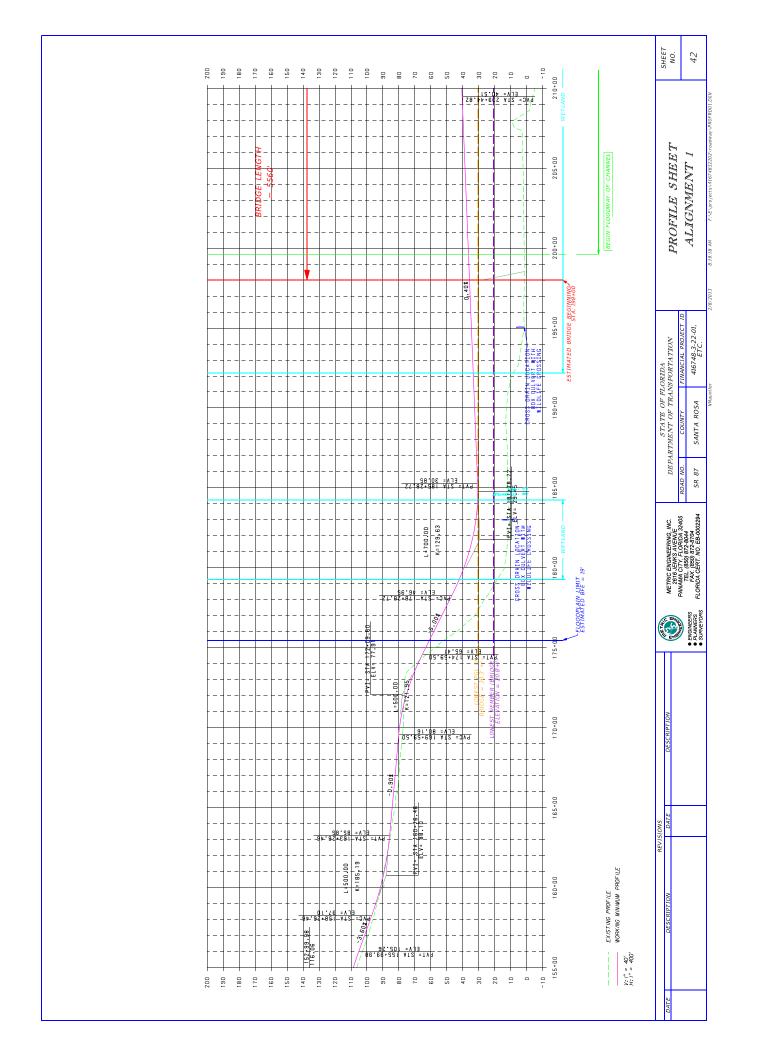
COUNTY NAME SANTA ROSA ALIGNMENT 1 - STA 100+00 - STA 455+15 LIMITS/MILEPOST ALIGNMENT 2 - STA 100+00 - STA 505+49	98'   1-4' 500   5'   4' 500   801LD0017:   57A. 253+71	*INCLUDES CLEAR CREEK BRIDGE FHWA CONCURRENCE	EHWA Transportation Engineer
PROJECT IDENTIFICATION  2-01 AND 416748-3-22-02	PROPOSED RURAL ROADWAY TYPICAL SECTION  RAW VAGIFS  1874 VAGIFS  1875 - 284  1876 B STABILIZATION  LBR 40  DESIGN SPEED = 65 MPH	FDOT CONCURRENCE	JOHN S. GOLDEN, P.E. FDOT District Design Engineer
FINANCIAL PROJECT ID 416748-3-22-01 AND 416748-3-22-02 SECTION NO. 58040 PROJECT DESCRIPTION SR 87 CONNECTOR FROM S	Matural Ground  DEPTH AND WIDTH VARY  SEE CROSS SECTIONS	APPROVED BY JESSICA BLOOMFIELD, P.E.	Engineer Of Record DATE

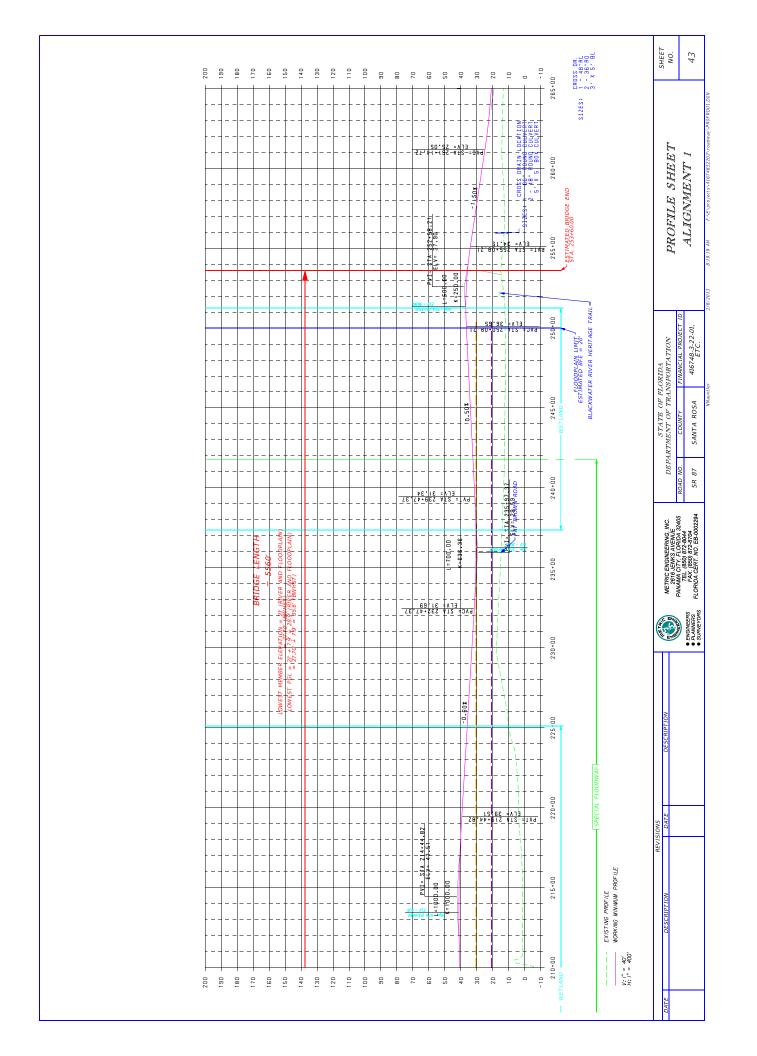


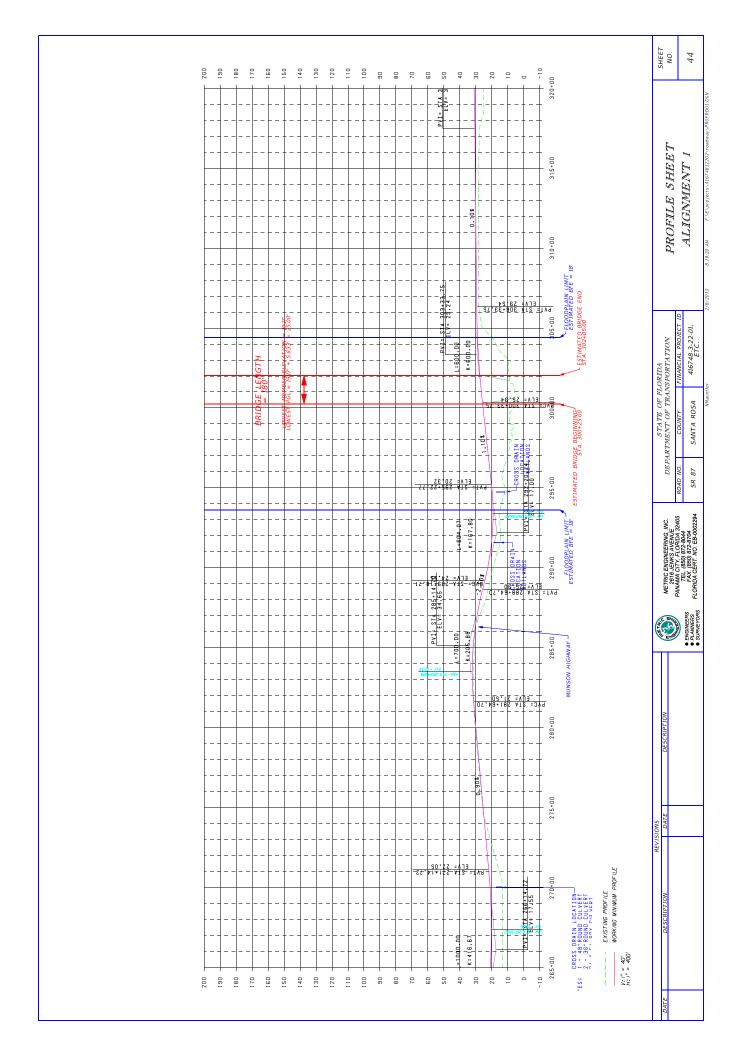


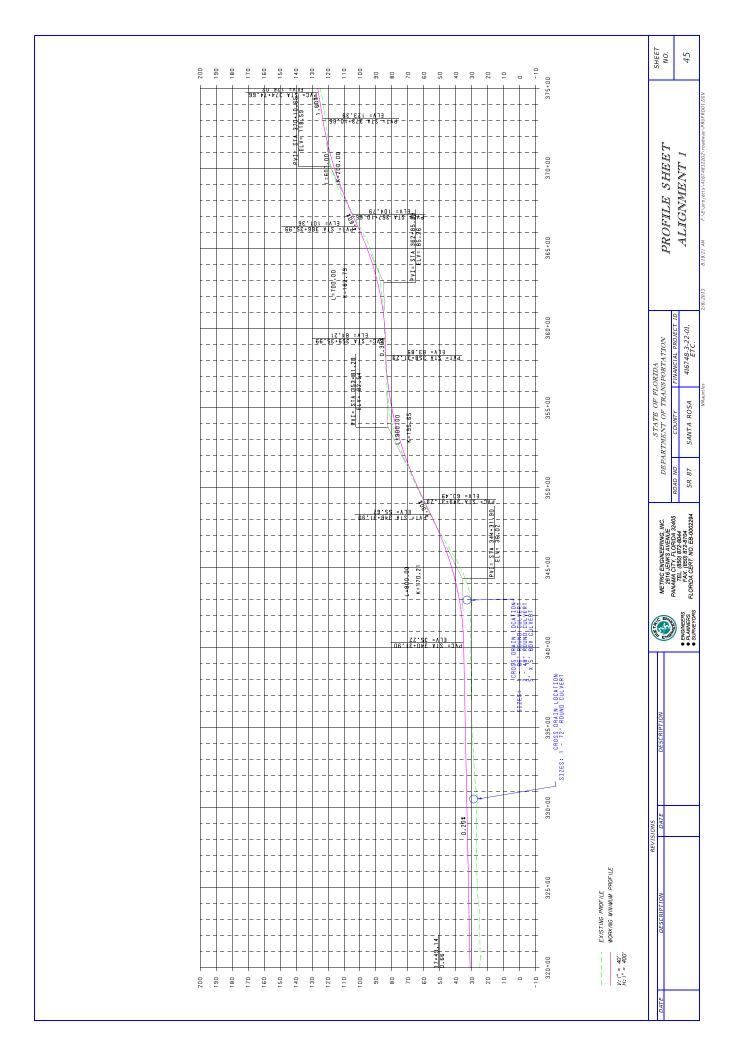
		Wetland Evaluation Report
SR 87 CONNECTOR		Wetana Evaluation Report
	Annandiy H	
	Appendix H	
	<b>Profile Sheets</b>	

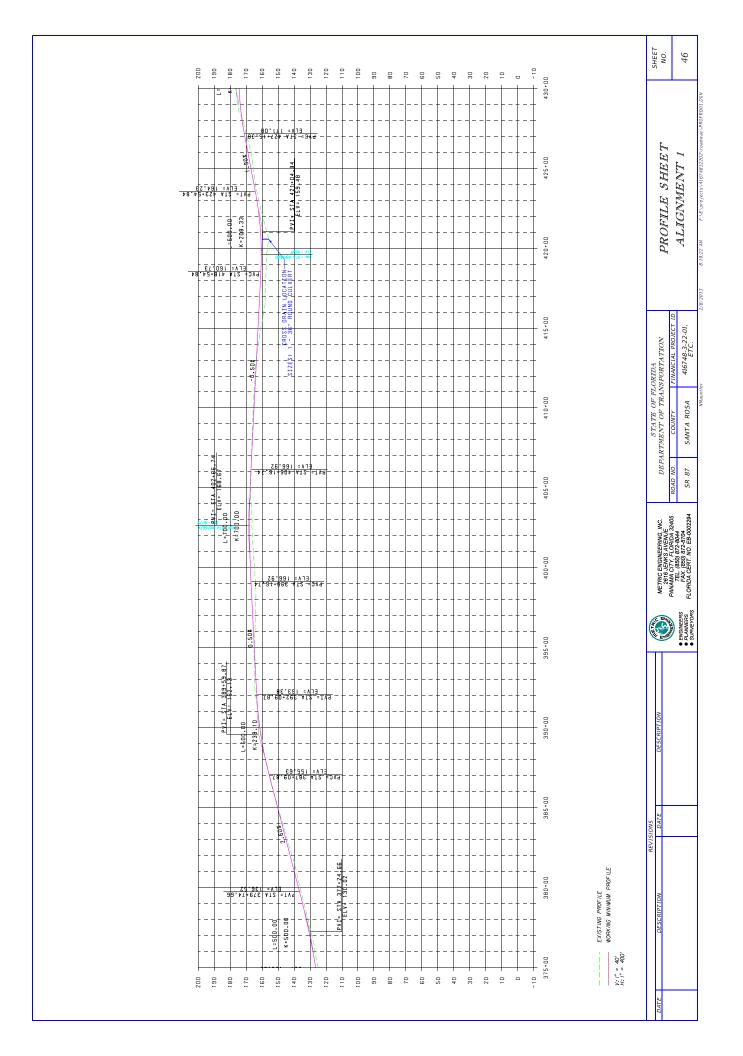
SHEET NO. 41 200 190 180 170 150 150 130 10 100 30 50 10 10 155+00 PVI= STA ELV= L=600.00 K-187.50 PROFILE SHEET ALIGNMENT I 150+00 145+00 K=400.00 140+00 FINANCIAL PROJECT ID 416748-3-22-01, ETC. STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION 100 135+00 SANTA ROSA COUNTY 64.861.81.27 ELV= 181.27 ROAD NO. SR 87 130+00 0.160% METRIC ENGINEERING, INC. 2616 LEINKS AVENUE PANAMA CITY, FLORIDA 32405 FLORIDA CITY, ENGINEERING FAX FAX (650) 872-8704 FLORIDA CERT, NO. EB-0002294 125+00 L=400.001 K=210.53 ENGINEERS
PLANNERS
SURVEYORS -38-31 -121 -37-3 -28-31 -121 -121 -37-3 120+00 -1430% 115+00 WORKING MINIMUM PROFILE 105+00 EXISTING PROFILE V: /" = 40' H: /" = 400' 100+00 











SHEET NO. 47 PROFILE SHEET ALIGNMENT I COUNTY FINANCIAL PROJECT ID 416748-3-22-01, ETC. STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION SANTA ROSA ROAD NO. SR 87 -10 460+00 METRIC ENGINEERING, INC.
2616 LEIKRS AVENUE
PANAMA CITY, FLORIDA 32405
FLORIDA 32405
FAX (680) 872-8704
FLORIDA CERT, NO. EB-0002294 455+00 ENGINEERS

PLANNERS

SURVEYORS 450+00 445+00 PVI=| STA 439492.66 SIZES: 1 - 86" ROUND CULVERTI L=500.00 440+00 EXISTING PROFILE WORKING MINIMUM PROFILE 435+00 V: I" = 40' H: I" = 400' 430+00 

SHEET NO. 46 200 - 10 155+00 PVI= STA L=600.00 PROFILE SHEET ALIGNMENT 2 150+00 PVC= STA 149.59.98 PVI= STA 141+94.79 145+00 K=400.00 COUNTY FINANCIAL PROJECT ID 416748-3-22-01, ETC. STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION 194 - 474 - 494 - 135+00 49.851 A12 =1 SANTA ROSA ROAD NO. 72.181 = V13 = 3Vq SR 87 130+00 1603 METRIC ENGINEERING, INC. 2616 JEMKS AVENUE PANAMA CITY, FLORIDA 32405 FL (650) 972-8044 FAX (650) 972-8704 FAX (650) 972-8704 PVT STA 123+15,55 L=400.00 66.821 = V18 = 3V4 120+00 130% 110+00 EXISTING PROFILE WORKING MINIMUM PROFILE 105+00 V: /" = 40' H: /" = 400' 100+00 

